Design of Game Design Document as an Interactive Media to Introduce the Culture of Pagar Alam City

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Abstract
Currently, the development of Information Technology is very rapid so that it affects the various needs and behavior of the community. Also, it includes influencing cultural interest and growth in Pagar Alam City. Nowadays young people and even young children are more comfortable playing games on their gadgets. Thus affecting their interest in getting to know their own hometown culture. The current approach must also follow people's behavior and the development of information technology. So, to introduce the culture of their beloved city, interactive media is needed that makes them feel comfortable and enjoyable in getting to know their hometown culture. Interactive media in the form of a mobile game to introduce the culture of Pagar Alam City. A game called "Besemah Raya" as an interactive media to introduce the culture of Pagar Alam City to its people to increase the sense of love and preserve the culture of Pagar Alam City. To make the game "Besemah Raya", we need a Game Design Document that will be a reference and guide in interpreting the concept of the game into an interactive media. This research aims to design a Game Design Document Game “BESEMAH RAYA” As an interactive media to introduce the culture of Pagar Alam City.

Keywords: Game, "Besemah Raya", Interactive Media, Game Design Document

INTRODUCTION
Culture is a legacy from ancestors that must always be preserved. This also includes Culture in the Pagar Alam City which is indeed very rich and thick with cultural customs and is one of the highlights of the culture of other cities in South Sumatra Province. Starting from the Besemah Language, many megalithic inscriptions even have a megalithic site in Pagar Alam whose age is older than the Egyptian Pyramid, The Culture of "Pantauan", to the Beauty of Mount Dempo which is the icon of Pagar Alam City.

The more and thicker the culture, the greater the reason for keeping the culture sustainable and always maintained. However, the approach taken in maintaining current customs and culture needs to be adapted to changing times and information technology. Productive Youth and even elementary school children feel much more comfortable playing various Games on their Smartphones. They indirectly have the responsibility to understand, study the customs and culture of Pagar Alam City so that later it can be preserved.

One approach that can be taken to provide an introduction, learning, understanding to know the customs and culture of the Pagar Alam City so that later it can grow a sense of responsibility to preserve it is to use interactive media in the form of a mobile-based game. We know that children and young people of childbearing age are more comfortable playing games on their smartphones rather than listening to information about the customs and culture of their hometown. They feel no need to know and tend to feel bored with things that smell of culture that feels old-fashioned to them.

However, with an information technology-based approach, where we create a mobile android based game where the game becomes an interactive media to introduce the culture of Pagar Alam City to its users or players. Studying the culture of Pagar Alam City will be more fun, enjoyable and not boring. So that grows interested in understanding the culture of Pagar Alam City.

Mobile Android-based games that will become interactive media to introduce the culture of the Pagar Alam City are called "BESEMAH RAYA" Games. "Besemah" is a nickname from Pagar Alam City which was passed down from the ancients. In Pagar Alam Malay language, "Be" means "River", "Semah" is a fish in the Lematang river in Pagar Alam. So "Besemah" means the river that has Semah fish. The name of Besemah itself is a cultural heritage of Pagar Alam City that is not even widely known to the public, especially children and young people of productive age. In the game "BESEMAH RAYA", there will be several different missions or games that show the culture of Pagar Alam City such as, "Dempo Run", "Pantauan", "Puzzle Megalith". In each mission or game, there are different objectives and gameplay. And the players will collect "Biji Kopi" which are the main commodity of Pagar Alam City. This "Biji Kopi" can be used to unlock missions, unlock characters, purchase culture cards, and others. In each mission, players will also get a culture card randomly which later this cultural card will have information about various cultures that exist in Pagar Alam City. Players can also collect up to hundreds of cultural cards to see and understand the various cultures that exist in Pagar Alam City.

With the mission that must be done first, various types of gameplay in 1 game, as well as various information on cultural cards, players will experience interactive learning culture in Pagar Alam City in a fun way. In the end, more and more people will recognize, learn about the culture of Pagar Alam City, the culture and customs in the Pagar Alam City will be more sustainable and secure.

Based on the explanation above, the authors are interested in finding out how to make a game design document "Besemah Raya" ?. In hopes, games as interactive media can increase Pagar Alam's community interest in the culture of Pagar Alam City and grow the desire to preserve it.
LITERATURE REVIEW
According to Soeheri, Lendy (2014) Currently, the development of the trend in information technology increases rapidly in any aspects including the aspect of education. The aspect of early childhood education is no exception. Today's children prefer learning in ways that are fun, not boring, entertaining but which still educates them. They tend to enjoy learning through games using their smartphones, tablets and other gadgets. That's why we need an interactive media to learn with fun for children and productive youth age. Not only teenagers or older people, but at this time many children are interested in games to fill their free time compared to learning textbooks. Also, the game can help people grow creativity, and make a decision both in the development of educational and non-educational games (Situmorang, 2015)

As the development of the mobile gaming industry is increasing rapidly, the game today not only serves as entertainment alone. The development of technology can be incorporated into art and culture thus its benefits are obtained by facilitating and accelerating the search for information and add insight into the art and culture through the use of mobile gadgets. But it becomes not enjoyable if the application only provides information alone thus by combining some entertainment such as a game, will make the application more attractive (Kidi et al., 2017). A game is a media that is used to convey a purpose. In the game, there are many objectives which include education, entertainment or simulation. Game is an effort to cultivate oneself (mind or physical exercise) which is certainly beneficial for the development and improvement of motivation, performance, and also achievements in carrying out tasks or in the interests of the organization well (Fajar et al., 2015).

The development of Information Technology plays an important role in human life, one of the technologies currently developing very rapidly is smartphone technology, especially those based on Android. Game is one of the entertainment media, but now the game can be intended as one of the media introduction to cultural Tradition (Sanjaya et al., 2016). Changing the platform from traditional games to mobile smartphone platforms can help preserve traditional games. It is hoped that digital games can motivate young people to get to know the rules of traditional gameplay and preserve these traditional games. With information technology, many things can be achieved including preserving tradition and culture. They produced a game design document design to introduce the traditional game of Angklek Skeman Yogyakarta using the development method of Digital Game-Based Learning (DGBL) with only one gameplay for the entire game. (Putri et al., 2015)

Game design is a process of imagining a game and determining how it works and describing or explaining the elements that make up the game such as conceptual, functional, artistic, etc. to convey information about the game to the team that will develop it (Adams, 2003).

Game designers produce a series of documents to inform others about the game design. The document informs a series of ideas that are designed into written form as well as pictures that explain these ideas and can explain the red thread of the design. (Adams, 2003).

According to Andrew Rollings and Ernest Adam (2003), game design is a process of imagining a game idea, defining how the game works, describing the elements that build the game (in terms of the concept, the function, the artistic aspect and so on) and presenting the information about the idea of the game to the game development team.

According to Adams, Ernest (2010), a game design document is a collection of documents used by game designers to inform about the designed game, this process changes the idea that at first is abstract into a written plan. There are various kinds of game design documents, each has its characteristics and different functions. Here they are:

<table>
<thead>
<tr>
<th>Type of Game Design Document</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Concept Document</td>
<td>To inform the producer or publisher about the game to be developed. This document consists of the key ideas of the game.</td>
</tr>
<tr>
<td>Game Treatment Document</td>
<td>To present the game in an outline form to those who wish to know about the game that we are going to develop this document is still simple, may take a form of brochures containing all the basic ideas of the game is be developed.</td>
</tr>
<tr>
<td>Character Design Document</td>
<td>It is specifically used for recording the designs of the characters that appear in the game that is going to be developed, which often takes a form of avatars.</td>
</tr>
<tr>
<td>World Design Document</td>
<td>It serves as the base for all the graphic arts and audio that describe the game world of the game that is going to be created. This document contains information about the background of miscellaneous objects in that world.</td>
</tr>
<tr>
<td>Flow Board</td>
<td>It is a cross between a flowchart and a storyboard, where the storyboard is a linear document used to plan a series of illustrations according to the storyline, while the flowchart is used by programmers to document algorithms.</td>
</tr>
<tr>
<td>Story Level and Progression Document</td>
<td>This type of document records the large-scale story of the game to develop and how to progress from each one level to the next level. This document contains an overview of the experience of the gamers after playing the game be developed.</td>
</tr>
<tr>
<td>Game Script</td>
<td>The game script records the rules and the core game mechanics. It can make us know how to play the game and specify the rules of the game in detail.</td>
</tr>
</tbody>
</table>

Table 1: Game Classification.

<table>
<thead>
<tr>
<th>Game Classification</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Game as Game</td>
<td>For entertainment or pleasure.</td>
</tr>
<tr>
<td>Game as Media</td>
<td>To convey a certain message from the game maker</td>
</tr>
<tr>
<td>Game beyond Game</td>
<td>The application of a concept or way of thinking game design into the scope of non-games</td>
</tr>
</tbody>
</table>

Table 2: Various Type of Game Design Document.
**METHOD**

In this study, the authors use the Game Development Life Cycle method to determine the stages in the development of a game, but the authors will focus on the Pre Production stage which at this stage is a continuation of the initiation stage which will produce an output of a Game Design Document following the author’s objectives. The following is a picture of the stages of the game development life cycle.

![Game Development Life Cycle Diagram](image)

**RESULTS AND DISCUSSION**

**Game Concept**

"Besemah Raya" is a game that functions as an interactive media with its main function being to convey messages and information about the customs and culture of the Pagar Alam City through features in the game.

The players have the main task of completing each level in each mission contained in the game. Players also have to collect various "karti budaya" spread over each level in each mission.

There are 3 missions in the game namely, "Dempo Run", "Pantauan" and "Puzzle Megalith". Each mission has different gameplay so that the players do not get bored playing. Players can collect "Biji Kopi" that can function as coins to unlock missions, unlock characters, culture cards in the "Toko" feature.

**Game Genre**

Based on the concept of the game, the game "Besemah Raya" has an Arcade Game Genre where players are required to look for as many points as possible. Also, based on Gameplay this game is included in the Puzzle Genre.

**Target Audience**

The game "Besemah Raya" is an interactive media tool to introduce the culture of Pagar Alam city. So that the target audience of this game starts from elementary school children and young people of productive age with a range of ages 10-25 years. Because they are agents of change to preserve the culture of Pagar Alam city. However, when viewed from the Game Concept and Genre this game can be played by adults and even audiences of all ages.

**Look and Feel**

Because in this game there are three missions with different gameplay in each mission, so each mission also has its camera perspective. The 2D camera perspective for the "Dempo Run" mission so that players get a broad view of the side of the character with the background in this mission is Mount Dempo and the atmosphere. The "Pantauan" mission has a subjective perspective of the location of the camera behind the player when the player will catch falling food. The "Puzzle Megalith" mission uses the isometric perspective camera. The location of the camera on top of the game interface so that the puzzle looks full and is easy to arrange. The dominant color of each mission is also different from the others according to the atmosphere of each mission.

To make the player feel the interaction with the game and easily understand the gameplay, when starting the Game NPC...
"Major" will briefly explain about the trivia of Pagar Alam, then the Major will give a mission to the Player to understand the culture in Pagar Alam city. When playing in the "Dempo Run" mission, NPC "Cahaya" will guide the player and provide the narratives to help the player such as notifying about Power Up, giving information about "Biji Kopi" and "Kartu Budaya" and giving tutorials at the beginning of the game for each mission.

**Feature Set**

In the game "Besemah Raya", there are features that players can access. The following is a list of features in the game "Besemah Raya".

**Table 3: Feature set game "Besemah Raya".**

<table>
<thead>
<tr>
<th>No</th>
<th>Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Timer (yć)</td>
</tr>
<tr>
<td>2</td>
<td>Pause (≡)</td>
</tr>
<tr>
<td>3</td>
<td>Home (ę)</td>
</tr>
<tr>
<td>4</td>
<td>Back (ć)</td>
</tr>
<tr>
<td>5</td>
<td>Mulai</td>
</tr>
<tr>
<td>6</td>
<td>Galeri Budaya</td>
</tr>
<tr>
<td>7</td>
<td>Karakter</td>
</tr>
<tr>
<td>8</td>
<td>Toko</td>
</tr>
<tr>
<td>9</td>
<td>Mulai Baru</td>
</tr>
<tr>
<td>10</td>
<td>Pengaturan</td>
</tr>
<tr>
<td>11</td>
<td>Bantuan</td>
</tr>
</tbody>
</table>

**Project Scope**

Players will start the game through the mission "Dempo Run", in the Dempo Run mission 10 Levels are starting from level 1. Players can play the next level if they have completed the game at the current level. When a player collects Enough "Biji Kopi", the player can unlock 2 other missions namely the "Pantauan" Mission and the "Puzzle Megalith" Mission.

In "Pantauan" missions and "Puzzle Megalith" missions, players can play 10 available levels. Players start the mission from level 1 and if it has completed, they can proceed to the next level. Each mission has 10 levels, which will be unlocked. If the previous level is finished the player can play the next level.

Randomly 50 "Kartu Budaya" will appear at every level and mission for player collection. When the Player gets the "Kartu Budaya", the NPC "Cahaya" will congratulate the player. And when the level is finished and the player gets a "Kartu Budaya", NPC "Puyang" will explain the "Kartu Budaya" that is obtained by the Player. A "Kartu Budaya" is a Card that contains Pictures and Information of cultures in the Pagar Alam City. Player also can purchase "Kartu Budaya" on "Toko" Menu using "Biji Kopi".

**Gameplay and Mechanic**

In the game "Besemah Raya", there are several characters that are classified into two types, namely NPC (Non-Playing Character) and Playable Characters. NPCs are characters that cannot be played but can interact with players through information provided by NPCs. While Playable Characters is a Character that can be played by the Player in completing the levels in each mission.

**Figure 2: "Misi" Features**

Each Character has physical characteristics each different from the others. For Playable Characters, all characters also have different physical and appearance characteristics and have different actions when getting Power Up. At the beginning of the game, the player can only play 1 character. However, players can open every character available in the "Toko" by using "Biji Kopi". To find out all the characters in this game, it can be seen in the figure and table below.

**Table 4: List of NPCs**

<table>
<thead>
<tr>
<th>No</th>
<th>Name</th>
<th>Physic</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mayor</td>
<td>Round Head, Black Semi Bald Hair, Brown Skin, Thin Beard, White Shirt, and Black Suit.</td>
<td>A good and wise leader of Pagar Alam City gives a mission to players to get to know the culture of Pagar Alam City.</td>
</tr>
<tr>
<td>2</td>
<td>Puyang</td>
<td>Round Head, Thin White Hair with a long beard, Long white shirt, carrying a stick.</td>
<td>Wise Old Grandfather, provides information about the culture of the Pagar Alam City on the Cultural Card.</td>
</tr>
<tr>
<td>3</td>
<td>Cahaya</td>
<td>Round Head, Pony Hair, carry bag, white T-Shirt in orange variations.</td>
<td>A cheerful and intelligent girl, helping players through tutorials at the beginning of a mission, telling the culture behind every successful mission.</td>
</tr>
</tbody>
</table>

The NPCs list above is a character that will always interact with the player through the character the player has chosen. And the following is a list of playable characters in this game:

**Figure 3: List of Characters**

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Table 5: List of Playable Character

<table>
<thead>
<tr>
<th>No</th>
<th>Name</th>
<th>Physic</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Alam</td>
<td>The round head wears a hat, carries a hiking stick, Green Variation White Shirt. A mountain climber who loves Nature very much.</td>
<td>Will be accompanied by wind breeze when receiving power-ups.</td>
</tr>
<tr>
<td>2</td>
<td>Senja</td>
<td>Round Head, Long Hair, Pink Shirt, there is a flower motif in the middle of Nature Fence Girl who likes gardening.</td>
<td>Will be accompanied by a Rain of Flowers above the head when receiving power-ups</td>
</tr>
<tr>
<td>3</td>
<td>Mentari</td>
<td>Round Head, Short Hair, Orange Shirt with White Variations and the Sun logo in the middle of the shirt. Senja’s Sister who love farming.</td>
<td>Will be accompanied by Sunlight overhead when receiving power-ups.</td>
</tr>
</tbody>
</table>

Gameplay and Game Progression

When the player first enters the game, it will go to the splash screen. Then, NPC Major will explain a brief explanation of Pagar Alam City and its culture. Then the player can choose which mission to play. Every time a player first plays a mission, the Player will be given a Tutorial by NPC “Cahaya” about how to advance the mission.

The first time players play the game, players can only play “Dempo Run missions”. In the “Dempo Run” mission, players can move the character by performing swipe up and swipe down gestures to avoid obstacles and take as many “Biji Kopi” as many as possible and take “Kartu Budaya” and power ups. In the Dempo Run mission, there are 10 levels that can be played. The higher the level, the level of the game will be more difficult and various obstacles will arise.

On The “Pantauan” mission, players are required to take as much food and “Biji Kopi” as many as possible. The character can be moved by doing swipe left and swipe right gestures. Food and coffee beans will continue to fall and the timer will continue to run. Players must survive in the time available to be able to take as much food and “Biji Kopi” as many as possible and must avoid food waste. Ten levels can be played in this mission, when the level increases the time given will be more and more. However, the level of difficulty will also increase.

In the “Puzzle Megalith” mission, players are required to compile a picture puzzle megaliths in the Pagar Alam City. Players can choose the appropriate puzzle pieces by swiping up and swiping down on the puzzle assemblies. Then the player can choose a puzzle piece and draw it to the appropriate puzzle piece. Players must complete the puzzle before time runs out. There are 10 levels available in this mission, the higher the level in this mission the time given will increase but, the number of puzzle pieces that must be completed will also increase.
Mission Challenge
In each mission, players will experience different experiences with different gameplay. Also, at each level players will feel the challenges they must pass to complete the level and mission.

The following is a list of challenges for each mission and level that players must pass to complete each mission and level:

<table>
<thead>
<tr>
<th>No</th>
<th>Mission</th>
<th>To Pass</th>
<th>Challenge</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>DempoRun</td>
<td>Collect coffee beans according to the target, Avoiding Obstacles, The score is calculated based on the calculation of the shortest time in collecting coffee beans according to the target</td>
<td>At Level 1 Target: 100 “BijiKopi”. Increase 20% Target every time advanced next level. Frequency of obstacles appearing at level 1: 5%. The frequency will increase by 5% every time advanced to the next level.</td>
</tr>
<tr>
<td>2</td>
<td>Pantauan</td>
<td>Take as much food as possible to count into a score Take “Biji Kopi” on target before time runs out. Avoiding leftovers will lose if player take leftovers.</td>
<td>At Level 1 Target: 50 “BijiKopi” with 2 minutes. 20% increase in Target and 30 seconds every next level. Frequency of the appearance of leftovers at Level 1: 5% will increase by 5% every next level.</td>
</tr>
<tr>
<td>3</td>
<td>PuzzleMegalith</td>
<td>Arranged the puzzle exactly before time runs out. Will lose if time runs out and the puzzle has not been arranged.</td>
<td>At Level 1 Time: 2 minutes for a total of 10 Puzzle pieces. The time will increase by 30 seconds and the puzzle pieces. Increases by 30% every next level.</td>
</tr>
</tbody>
</table>

Table 6: List of Challenge on Every Mission

Play flow
Play flow explains how the flow of the game is felt by the player. Play flow also gives players instructions about the flow of the game and how to get started, or more familiarly known as a tutorial.

Players can play 3 missions available in the game, but for the first time, players can only play the mission “Dempo Run” which consists of 10 Levels. When entering the mission select menu for the first time, NPC Cahaya will provide information about the gameplay of the mission. Players can only play playable levels and missions. When the player completes 1 level, the next level automatically opens. The player can also unlock locked missions using collected “Biji Kopi”.

For demo run missions, how to play it is very easy. Players are required to collect “Biji Kopi” following the target and at the same time, players must avoid various obstacles that exist. Players can move their character with a swipe up gestures to move jumps to the top row and swipe down to move to the bottom row.

Mechanic Game
Various rules are set for interaction between the game and the player. This is what Mechanic Game means. After running the game application “Besemah Raya”, the splash screen and the game loading sign will appear. Afterward, Back Ground Music will appear and the Player must tap the screen to enter the main menu.

Playing Character) and Playable Character. NPCs are characters that cannot be played but can interact with players through information provided by NPCs. While Playable Character is a Character that can be played by the Player in completing the levels in each mission.

When the player enters the main menu for the first time, NPC “Mayor” will appear to introduce itself and tell a brief trivia about Pagar Alam City and give the mission of the Player to understand the culture of Pagar Alam City. In the main menu, the Player can choose various menus and features including “Mula”, “Karakter”, “Galeri Budaya”, “Toko”, “Pengaturan”, “Bantuan” and “Keluar”.

Figure 8: After Splash Screen
The following are various functions of the buttons in the main menu. If the player clicks the “Keluar” button, the game will close. If the player clicks on the “Bantuan” button, the player will see general information about the game “Besemah Raya” and Game Developer Information. The “Pengaturan” button functions to make audio and video settings. For audio settings, the player can adjust the volume of sound effects and background music. For video settings, the player can adjust the resolution to your liking and the optimal resolution of the player gadget.

Figure 9: Main Menu Screen
Players can choose or open the character you want to play through the “Karakter” menu. After clicking the “Karakter” menu, the player will enter the character select menu. Players can only select and play unlocked characters. However, players can also unlock locked characters by using collected “Biji Kopi”.


The "Toko" Menu is a collection of various menus that can be bought by players using "Biji Kopi". Starting from the Mission, Character and Culture Card. The player is made easy to unlock various locked features through the store menu access. In the upper left corner, there is a button with a left arrow icon which is a Back button for players to return to the menu or previous features. Next to the Back button is the Home button which functions to bring the player to the main menu. If the player clicks on the start button, the player will enter the mission select menu and is required to choose a mission that can be played. After clicking on a mission, the player will enter the level select menu. Players can play the available levels and players can play these levels repeatedly. When entering the "Dempo Run" mission, players must take "Biji Kopi" following the target and are required to avoid obstacles at the same time. The obstacles that appear on the "Dempo Run" mission will be more and more frequency along with the increasing level of the game. Obstacles in the "Dempo run" game, consist of static obstacles such as rocks, trees and dynamic obstacles that can move rows like birds. Consists of 10 levels that can be played by players with logic, the greater the level the more "Biji Kopi" are collected but the obstacles will appear more often. For the "Pantauan" mission, players must catch food and "Biji Kopi" in accordance with the target before the time limit runs out. At the same time, players must avoid food leftovers that also fall with food and "Biji Kopi". If the player gets food leftovers, the game ends. When the level increases, the time owned by the player will also increase but with the target of "Biji Kopi" that also increases. The greater the level, the more time and target "Biji Kopi" with the frequency of food leftover which also increases. In the "Puzzle Megalith" mission, players are required to compile a puzzle consisting of pictures of megaliths in the Pagar Alam City before the time is up. If time runs out and the puzzle isn't finished, the game is over. The greater the level of the game, the greater the time allotted and also more puzzle pieces. In the "Galeri Budaya" menu, players can access various cultural cards that have been collected by players using "Biji Kopi" to open the "Kartu Budaya". When a player clicks on an open culture card, NPC Puyang will appear to explain information about the culture of the Pagar Alam City contained on the selected "Kartu Budaya".

**Figure 10: "Karakter" Feature**

**Figure 11: "Galeri Budaya" Feature**

**Figure 11: Screen Flowchart Game "Besemah Raya"**

Based on the picture above, we can understand how the flow of each screen in the game "Besemah Raya". Starting from opening the Splash screen that appears when the player accesses the game through a gadget, then enter the main menu in this main menu, players can choose various features that we can see on the screen access screen flow chart, such as "start" to start playing the game, "Exit" to exit the game, "character" menu to select and unlock characters, culture gallery to choose a culture card to be able to understand the game's features.
information in the culture card and open the culture card, the
"shop" feature for unlock missions, locked characters, and
culture cards, "Pengaturan" menu to manage in-game audio
and video.

This Screen Flow is a reference and guideline used by
programmers to later determine how to access from one
screen to another and from one feature to another.

Level Design

There are 3 missions in the "Besemah Raya" Game, each of
which describes the culture of Pagar Alam City. Each mission
has its gameplay and is different from the others. So that
players will not easily feel bored. In each mission, several
quests must be completed by the player. The following is a
list of information for each mission.

<table>
<thead>
<tr>
<th>No</th>
<th>Mission</th>
<th>Quest</th>
<th>Availability Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>DempoRun</td>
<td>Acquired Targeted Coffee Beans, Avoid Obstacle</td>
<td>10 Level Available</td>
</tr>
<tr>
<td>2</td>
<td>Pantauan</td>
<td>Acquired Targeted Coffee Beans Before Time Run Out, Avoid Food Leftover.</td>
<td>10 Level Available</td>
</tr>
<tr>
<td>3</td>
<td>Puzzle Megalith</td>
<td>Completed Puzzle Before Time Run Out.</td>
<td>10 Level Available</td>
</tr>
</tbody>
</table>

In each mission, ten levels can be played, where all levels have
every challenge that is different from other levels. The greater
the level in each mission, the more challenging it will be and
the target to be achieved is greater. The following are details
of the design level

<table>
<thead>
<tr>
<th>No</th>
<th>Mission</th>
<th>Target Score</th>
<th>Time</th>
<th>Frequency Enemy AI</th>
<th>Amount of Puzzle Piece</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>DempoRun</td>
<td>100 Biji Kopi On Level 1. Increase 20% For Each Next Level</td>
<td>-</td>
<td>5% On Level 1. Increase 5% For Each Next Level</td>
<td>10 Pieces Puzzle on Level 1. Increase 30% For Each Next Level</td>
</tr>
<tr>
<td>2</td>
<td>Pantauan</td>
<td>50 Biji Kopi On Level 1. Increase 20% For Each Next Level</td>
<td>2 Minutes on level 1. Increase 30 Seconds for each Next Level</td>
<td>5% On Level 1. Increase 5% For Each Next Level</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Puzzle Megalith</td>
<td>2 Minutes on level 1. Increase 30 Seconds for Each Next Level</td>
<td>2 Minutes on level 1. Increase 30 Seconds for Each Next Level</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Artificial Intelligence (AI)

- Artificial Intelligence is one of the key elements in a
game. AI refers to intelligence created by people using
special logic and algorithms so that they will have roles
and functions in the game. In every game, there must be
an artificial intelligence with various roles and functions.
Based on the classification of roles and functions, in
Game Besemah Raya AI is divided into 3 groups, including:
- Friendly AI. An AI that is friendly to the player and helps
players in playing games through information
and interactions that are carried out to the player. There
are 3 Friendly AI Characters which are at the same time
Non-Playable Character (NPC):
- Major. A good and wise leader of Kota Pagar Alam gives a
mission to players to get to know the culture of Pagar
Alam City.
- Puyang. Wise Old Grandfather, provides information
about the culture of the Pagar Alam City on the "Kartu Budaya".
- Cahaya. A cheerful and intelligent girl, helping players
through tutorials at the beginning of a mission, telling
the culture behind every successful mission
- Enemy AI. It is the AI that always interferes with the
Player to fail in carrying out the mission.
- Time. Time is a challenge for the Player, because they are
required to complete the "Pantauan" and "Puzzle Megalith" missions before time runs out.
- Obstacle. Obstacles are of two types namely static and
dynamic obstacles. Static barriers are obstacles that
stand still and don’t move like rocks and trees. Dynamic
barriers are obstacles that move like birds. Obstacle only
exists in Gameplay "Dempo Run".
- Food Leftover. Food leftover only exists in the
"Pantauan" gameplay, which is food waste that must be
avoided by players to complete the mission.
- Puzzle Structure. Puzzle Structure consists of the
number of puzzle pieces, each level several different
puzzle pieces. The greater the level in the mission
"Puzzle Megalith", the more puzzle pieces that make up
the puzzle structure
- Support AI. Support AI is logic and algorithm that has
specific functions to support players in completing
missions perfectly. AI support is a variety of power-ups
that help players such as invisibility and extra time

CONCLUSIONS

After doing this research, the authors can conclude several
things that the design of a game design document to make a
game with a great game as an interactive media is one way to
introduce the culture of Pagar Alam city that follows the
development of Information Technology. To make a design of
the game design document, a method can be used for effective
design. In this study, the author uses the Game Development
Life Cycle Method as a reference for making the Game Design
Document Game Besemah Raya. The first stage in making
game design document design is the "Initiate" stage where the
authors collect references, various ideas, concepts and
approaches to Game Design Document that will be used. At
this "Initiate" stage, a set of ideas and concepts will be
generated which will later be poured into a game design at a
later stage. Next is the "Pre-Production" stage, at this stage the
author translates various ideas and concepts collected in the “Initiate” stage into a Game Design Document. The author makes specific details ranging from Game Overview, Gameplay and Mechanics, Screen Flow, Level, and Artificial Intelligence. At this stage, detailed and complete concept art and graphics have been obtained. After the Pre-Production stage is completed, the Game Design Document which becomes the reference for developing and implementing a game has been obtained.

In this study, the author has made a game design document design "Besemah Raya" but there are some things that have not been done by the author and is expected to be carried out in subsequent studies on other occasions. The author hopes, the results of the Game Design Document can be implemented directly to produce a prototype and even fully functional game. There are many new characters, new missions and other levels that will be updated to add features that can be played by players. More cultures are updated in the game so that players can understand more about the cultures of Pagar Alam City.

REFERENCES