TiE University – Business Challenge for TiE Hackathon, March 12-14 2021

Challenge: **I-Remember – An App for my Grandma**

Problem Statement

As people get older, their memory suffers and they can have a hard time remembering things

Against this background, the internet and the electronic games market have come up with numerous games and exercises designed to train and engage an individual's brain, with a view to providing challenging exercises to test alertness and memory.

The I-Remember game fits within this category, but has the added function of personalizing the game to the individual concerned. This is done by using family photographs from days gone by. .

The custom game has to be highly usable by an elderly individual, leading to quicker and greater adoption with commensurate benefits to the individual and the immediate family or friends close by.

Detail

1. Develop an app for use on the I-phone which has the following functions:
Capture old photographs, either by taking a photo of the old picture, or by copying in a jpeg of the old photograph.
  Ensure that the photograph has clearly recognizable faces and use a finger to mark out circles around each face, for a maximum of six per photographs.
  For each marked out face, record a sound clip with the person's name.
  The game consists of the name being announced in random sequence and the individual having to touch the image of the person whose name was called out.
  The app tracks correct identification and time taken for identification and gives a score.

Use Case 1: Game Set Up

Ref	Use case	Description
#1.1	Picture select and capture	Take a photograph in a smartphone of an old picture where faces are clearly visible. Picture is given a name or user-friendly ID to be able to select it.
#1.2	Mark out the faces	Using a finger mark out the area identifying an individual – this will correspond to the screen area that has to be touched during game play for a successful match to name. A maximum of six faces are allowed initially.
#1.3	Record the name	This is the name that will be called out during game play. Each marked out face has a name recorded.

#1.4	Fine tune the game rules	• Maximum time allowed or no time limit • Wrong answer keeps play on the name announced until correct face identified or play moves on • Correctly identified faces are marked a different color making the game easier as it goes on versus leaving them unmarked • Player selects single picture at a time versus a succession of pictures in a linked pictures game • Enter the list of player names • Show or don't show the timer

Use Case 2: Game Play

Ref	Use case	Description
#2.1	Enter Name	Player selects name from a pre-populated list of names
#2.2	Picture Select	Player selects which picture to play
#2.3	Start	Timer starts. First name is announced
#2.4	Touch	Player touches the image of the person whose name was announced. Depending on game set up option, play moves on upon both correct and incorrect answer or play only moves forward upon correct answer
#2.5	Pause	Player can pause the game. Timer stops.
#2.6	Finish	Either upon completion of game or upon abandonment of game

Use Case 3: Game Report

Ref	Use case	Description
#1	Memory Evaluation	Number of right answers. Which name was not recognized. Which name took how many attempts greater than 1 to identify (if the set-up option to keep the game from moving forward upon incorrect answer was selected)
#2	Alertness Evaluation	Total time taken. Time per name.
#3	Consolidated Results	Same player, multiple plays on a given picture. Average total time. Average time per each name. Maximum and minimum times per name. Total number of plays.

Additional Information

The IP for the game, the code and the business rights are owned by the TiE Hackathon Business Challenge sponsor.

The winning team may be asked to continue in refining the game, e.g. by making the memory challenges harder and by working on version upgrades e.g. for Android phones.

The participating teams will have the right to use the code and the game for personal use, but any commercialization of the game must be cleared with the sponsor in writing first.

Expectation

Clarification questions and discussions will be permitted, either via email or via calls. The answers will be made transparent to all participating teams.

The app will run native code on the i-Phone and will store all data locally.

If the team feels the use of a cloud solution, or use of an existing platform game development platform is to be adopted, they have the choice to do so. In this case, suitable consideration will need to be given to privacy and security of data not stored on the phone.

The team will come up with a work up with no major bugs or non-functional components.

The screen design, user interface and overall user experience must be geared towards older people who are minimally familiar with smartphones.

The logistics and process needed for deploying the app on the Apple store are to be worked out.

Evaluation

1. App is complete, with full functioning of the defined use cases.
2. App has attractive displays, sounds and is easy to use.
3. Amount of thought put into distribution and possible commercialization of the app.
4. Approach taken for its marketing and successful use, including support requirements.

Working draft presented by

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