



SLDC PORTFOLIO

18/5/2017

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Initiation Phase

Project Brief:

Create a hangman game using Visual Basic 6 that is creative, user friendly and appealing to all demographics. The game has to have at least 3 categories with 10 words in each category.

- Deliverables (due 18.5.17)
 - Gantt Chart
 - Journal
 - Flowchart
 - Pseudocode
 - SLDC group portfolio

Hangman Group:

Our group consists of Rishabh Singh, James Balajan and Dibaloak Chowdhury. We have a good mix of creativity and technological expertise as well as extremely good synergy. We believe we have the correct components to create a good hangman game.

Analysis Phase

Project Goal:

- To complete a fun, innovative and error free hangman game.
- To have a detailed, logical flowchart.
- To have a concise, well thought-out pseudocode.
- To have an aesthetically pleasing and thorough SLDC portfolio.
- Have a realistic Gantt chart

Research:

History of Hangman

Hanging is believed to have originated from Persia 2500 years ago as a judicial method to execute male criminals. It was then brought to England by the Saxons in 5000 AD. It has remained the most common form of execution in England until 1964 because it is simple and can be carried out by unskilled executioners. This led to the development of the game hangman.

Hangman is a game whose exact history is unknown. However the earliest records of variations of the modern game are from Victorian Times. The first game of hangman involved criminals who were sentenced to be hung being in 17th and 18th century Europe having the option to request the “Rite of Words and Life”. A criminal was hung and put on a 5 legged stand. The executioner would select a word and use chalk to mark correct and incorrect guesses. At every incorrect guess, the executioner would use a sledgehammer or axe to knock

away one leg of the stand. At 5 wrong guesses the stand would fall and the criminal would be hung. If the entire word was correct the criminal was set free and not tried for the same crime.

Design Phase:



Our design is simple yet innovative. We have chosen darker colours because hangman is historically a dark game with the principle of the game having an outcome that involves hanging a man. However it is not too dark and the younger demographic can still play without feeling worried. We have kept a slightly retro look as it is original and makes it appealing to the older demographic. We also have three categories. Technology is catered to younger individuals, chemistry is catered to older individuals and computer science is for all demographics.

Journal:

Week 9 T1: Discuss basics like what our categories are going to be, how we envision the end product, who is assigned to what parts of the project like gantt chart, journal, flowchart, portfolio, introductory code, each of the forms. We will discuss how long these aspects of the project will take and how we will set out each of these parts.

Week 10 T1: Brainstorm ideas on the design and layout of the hangman, our intended audience, the difficulty of the words, the amount of lives the people have, the design of the hangman and the colour scheme. We will also brainstorm ideas on the layout and design of the portfolio. We will finish the Gantt Chart to get a general outline of how many lessons and how much time we will allocate to complete each section. We will start filling out the journal each week to have a good idea of the rate at which we complete the tasks and if we can follow the gantt chart and what sections require more time than others.

Week 1 T2:

We will continue working on the pseudocode and commence the flowchart simultaneously and work together making a thorough and logical flowchart and pseudocode. We will create draft designs for the starting form of the hangman. We will discuss how the user will pick the letters, if we are going to allow the user to use the keyboard or if we will create a keyboard on the screen. How many lives the user will have

and the difficulty of the words. We will also discuss the design of the you lose and you win outcomes. We will then work on the introductory code and see if there are any flaws with our designs.

Week 2 T2:

We will test the introductory form and see if we like it, what we can work on to improve it, if we should have keys on the screen or let the user use the keys on their keyboard. We will also begin the code for the different sections and have decided to make three difficulties but ensure the most difficult section isn't too hard. We will also work on the SLDC portfolio and ensure we keep working on it at a steady rate so it is finished by the time the assignment is due.

Week 3 T2:

We will continue working on the code for each of the categories and will finish it by the middle of the week. We will then test it and fix any bugs or errors and evaluate if this is similar to what we initially envisioned. We will also let some of our friends in the class test it and tell us what they think about it so far and if they have any improvements. We will listen to the feedback to make adjustments in accordance with the feedback. We will then work towards putting it together. Then we will rigorously test all the aspects of the game to ensure no bugs or errors occur. We will then commence the you win, you lose pages and code. After we finish the last parts of code we will debug it and test it. We will also continue working on the portfolio.

Week 4 T2:

We will come up with five questions for the evaluation questionnaire and ask the members of another ist group. We will then ask one family of a member of our group to evaluate our product and fill out the questionnaire. We will then ask ourselves to impartially evaluate our project and fill out the questionnaire honestly. We will then add the evaluation to the portfolio and finish up the portfolio and submit the project.

Pseudocode:

```
BEGIN
  ACCEPT CATEGORY AS STRING
  ACCEPT DIFFICULTY AS INTEGER
  ACCEPT TIMED AS BOOLEAN
  IF TIMED THEN
    IF DIFFICULTY = -1 THEN
      TIMER_INTERVAL = 120
    ELSE IF DIFFICULTY = 0 THEN
      TIMER_INTERVAL = 90
    ELSE
      TIMER_INTERVAL = 60
    ENDIF
  ELSE
    TIMER.ENABLED = FALSE
  ENDIF
  IF CATEGORY = "MATH" THEN
    LOAD CATEGORYMATH
  ELSE IF CATEGORY = "CHEMISTRY" THEN
    LOAD CATEGORYCHEM
  ELSE
    LOAD CATEGORYCS
  ENDIF
  WORD = RANDOM(WORD)
  TURNS = 6
  ROUND = 1
  IF KEYBOARDPRESS OR BUTTONPRESS THEN
    IF LETTER IN WORD
      PUT LETTER IN WORD
      IF WORD DONE THEN
        IF ROUND = 4 THEN
          TELL USER (YOU WIN)
          ASK USER (RETURN OR QUIT)
        ELSE
          INCREMENT ROUND
          WORD = RANDOM(WORD)
        ENDIF
      ENDIF
    ENDIF
  ENDIF
```



```

        IF DIFFICULT = -1 THEN
            TURNS = TURNS + 2
        ELSE IF DIFFICULTY = 0 THEN
            TURNS = TURNS + 1
        ENDIF
    ENDIF
ENDIF
ELSE
    DECREMENT TURN
    DRAW HANGMAN
ENDIF
IF 2 TURNS LEFT THEN
    IF DIFFICULTY = -1
        SHOW HINT
    ENDIF
ELSE IF 0 TURNS LEFT THEN
    GAME OVER
    ASK USER (RETURN OR QUIT)
ENDIF
ENDIF
END

```

Flowchart:

Testing Phase

Evaluation:

Peer Evaluation:

What's your view on the design of the game, do you like it, is there any aspects you dislike and do you have any suggestions for improvements?

The design is pretty cool. I liked it because it only has black and white throughout the whole game.

What's your view on the difficulty of the words, do you think any categories were too hard or too easy, were the different difficulties an appropriate gauge of the actual difficulties?

Some of the words were too hard for me because I couldn't guess them but the hint for easy mode is very helpful.

What was your honest overall opinion of the game taking into account all the factors, were there any major flaws in our game and do you have any feedback?

Fun game.

Student Evaluation 1:

What's your view on the design of the game, do you like it, is there any aspects you dislike and do you have any suggestions for improvements?

I found the game fun, unique and enjoyable.

What's your view on the difficulty of the words, do you think any categories were too hard or too easy, were the different difficulties an

appropriate gauge of the actual difficulties?

I found the difficult mode extremely hard while the easy mode was very easy.

What was your honest overall opinion of the game taking into account all the factors, were there any major flaws in our game and do you have any feedback?

Overall good game.

Student Evaluation 2:

What's your view on the design of the game, do you like it, is there any aspects you dislike and do you have any suggestions for improvements?

I like the different gameplay elements like timed and difficulty which make the game more enjoyable and add replayability.

What's your view on the difficulty of the words, do you think any categories were too hard or too easy, were the different difficulties an appropriate gauge of the actual difficulties?

I found some words a little difficult for people not familiar with the jargon of the different topics, for example in computer science.

What was your honest overall opinion of the game taking into account all the factors, were there any major flaws in our game and do you have any feedback?

I really enjoyed the game and found it to be a unique and interesting take on hangman

Family Evaluation:

What's your view on the design of the game, do you like it, is there any

aspects you dislike and do you have any suggestions for improvements?

I quite like the visual effects.

What's your view on the difficulty of the words, do you think any categories were too hard or too easy, were the different difficulties an appropriate gauge of the actual difficulties?

The words were an appropriate difficulty.

What was your honest overall opinion of the game taking into account all the factors, were there any major flaws in our game and do you have any feedback?

I found the game to be quite enjoyable.

Self-Evaluation 1:

What's your view on the design of the game, do you like it, is there any aspects you dislike and do you have any suggestions for improvements?

I quite like the visual effects which we have implemented, as well as the different gameplay options. I believe we could have included some topics for non-STEM oriented people as well though.

What's your view on the difficulty of the words, do you think any categories were too hard or too easy, were the different difficulties an appropriate gauge of the actual difficulties?

I believe the word choice was appropriate for each of the topics.

What was your honest overall opinion of the game taking into account all the factors, were there any major flaws in our game and do you have any feedback?

I believe the only major thing we lack is sound effects, and also better organisation.

Self-Evaluation 2:

What's your view on the design of the game, do you like it, is there any aspects you dislike and do you have any suggestions for improvements?

I believe that we have utilised minimalistic design to not be a weakness, but a strength in this game.

What's your view on the difficulty of the words, do you think any categories were too hard or too easy, were the different difficulties an appropriate gauge of the actual difficulties?

I believe the words are difficult for their respective topics and difficulties. Easy words are small while difficult words are large.

What was your honest overall opinion of the game taking into account all the factors, were there any major flaws in our game and do you have any feedback?

The final product is, in my opinion, an excellent product yet I believe we could have utilised better management skills.

Self-Evaluation 3:

What's your view on the design of the game, do you like it, is there any aspects you dislike and do you have any suggestions for improvements?

I think it's pretty cool.

What's your view on the difficulty of the words, do you think any categories were too hard or too easy, were the different difficulties an

appropriate gauge of the actual difficulties?

I think they are appropriately difficult.

What was your honest overall opinion of the game taking into account all the factors, were there any major flaws in our game and do you have any feedback?

I find the game fun, interesting and enjoyable.

Implementation Phase

We have finished the code as the part of our major project and submitted on 18/5/2017.

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