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# Dungeon Run Design Specifications

|  |  |
| --- | --- |
| Developers’ Perspective | Users’ Perspective |
| * Is coded with object oriented programming. * The game has a limited map, but the limited maps space is larger than the window, so the game can have side scrolling mechanics. * The game has enemies have behaviours that change. E.g. switching from following the player to stopping to shoot. | * Simple UI at the bottom of the screen displaying health and mana. * Has a tutorial that clearly explains how to play and what the goal is. * The game is short and can be completed in under 5 minutes. |

# Dungeon Run Log book

(see [SDD course specifications](https://educationstandards.nsw.edu.au/wps/wcm/connect/44325629-51c6-4330-8bf8-662d5cfbe5fb/software-design-development-course-specs.pdf?MOD=AJPERES&CVID=))

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Date /Time | Description of progress | Tasks achieved | Issues- stumbling blocks | references |
|  |  | Made a GitHub account  Made a GitHub Repository  Made a Stack Overflow account | None | <https://github.com>  <https://stackoverflow.com>  GitHub repository: <https://github.com/Jonathan-Andre-Hill/Software-Assessment-3> |
|  |  | Made design specifications  Made Gantt chart | None |  |
|  |  | Made dataflow diagram  Made flowchart |  |  |
|  |  | Made a menu that auto Fullscreen’s |  | <https://www.pygame.org/docs/ref/display.html#pygame.display.get_desktop_sizes>  <https://www.pygame.org/docs/ref/display.html#pygame.display.toggle_fullscreen> |
|  |  | Made it possible to jump between menu’s with a tutorial | Couldn’t understand why | <https://www.youtube.com/watch?v=GMBqjxcKogA> |
|  |  | I made working buttons for my menu using some info from a tutorial I followed in the past |  | <https://www.youtube.com/watch?v=AY9MnQ4x3zk&t=306s> |
|  |  | Found a way to accurately get screen resolution to scale everything for any screen | Everything I tried, get\_display\_sizes from pygame,  app.winfo\_screenwidth from Tkinter, they kept giving a resolution of (2560, 1440) on my 4k monitor. But I found a solution on stack overflow using the ctypes library | <https://stackoverflow.com/questions/36381225/tkinter-not-recognizing-screen-resolution-correctly#:~:text=Most%20probably%20you%20have%20some,divided%20by%20the%20scaling%20factor>. |
|  |  | Made a button class to generate buttons with functioning hovers | I had a lot of small syntax errors mainly forgetting self. before some variables. But I got it working. |  |
|  |  | Made buttons for all menu’s on main menu and a main menu button on the other menu’s  Made buttons call their specific menu function |  |  |
|  |  | I made variables for all the aesthetic customisation possible. E.g. the colours for everything, the fonts, the font sizes, ect |  |  |

# Dungeon Run Gantt chart

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Days from task handout | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Day 1 | Day 2 | Day 3 | Day 4 | Day 5 | Day 6 | Day 7 | Day 8 | Day 9 | Day 10 | Day 11 | Day 12 | Day 13 | Day 14 | Day 15 | Day 16 | Day 17 | Day 18 | Day 19 | Day 20 | Day 21 | Day 22 | Day 23 | Day 24 | Day 25 | Day 26 | Day 27 | Day 28 | Day 29 | Day 30 | Day 31 | Day 32 | Day 33 | Day 34 | Day 35 | Day 36 | Day 37 |
| **Stage 1: Documentation** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Setup Files & GitHub** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Brainstorm game idea** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Design Specifications** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Gantt Chart** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Dataflow Diagram** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Storyboard** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Stage 2: Learn Pygame** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Follow tutorials** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Make concept prototypes** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Stage 3: Coding the game** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Data Dictionary** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Make a menu system** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Make help page** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Make game movement** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Make game map** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Make multi level system** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Make enemies** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Make boss enemy** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Make collision damage system** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Make health systems** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Make player attack system** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Make UI with health, ect.** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **background music and sounds** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Stage 4: Post Coding** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Maintenance documents** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Maintenance projection** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Test Reports** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Update table of contents** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

This is the only way I could make the chart fit

# Dungeon Run Data Dictionary

|  |  |  |
| --- | --- | --- |
| Data item (variables) | Data Types ( sort data types together) | Description (of what the variable does) |
| screenResolution | Coordinate pair |  |
| screenWidth | Int |  |
| screenHeight | Int |  |
| screenMiddle | Coordinate pair |  |
| screenCenterX | Int |  |
| screenCenterY | Int |  |
| screenCenter | Coordinate pair |  |
| borderSize | Int |  |
| gameActive | Bool |  |
| xMovement | Float |  |
| yMovement | Float |  |
| playerSpeed | Float |  |
| playerWidth | Float |  |
| playerHeight | Float |  |
| slimeSpeed | Float |  |
| slimeWidth | Float |  |
| slimeHeight | Float |  |
| floorWidth | Float |  |
| floorHeight | Float |  |
| mainMenuBackgroundColour | RGB values, Colour Hex, String |  |
| helpMenuBackgroundColour | RGB values, Colour Hex, String |  |
| optionsMenuBackgroundColour | RGB values, Colour Hex, String |  |
| mainMenuButtonsSizeX | Float |  |
| mainMenuButtonsSizeY | Float |  |
| mainMenuButtonsPosX | Float |  |
| mainMenuButtonsPosY | Float |  |
| mainMenuButtonsYSpacing | Float |  |
| mainMenuButtonsColour | RGB values, Colour Hex, String |  |
| mainMenuButtonsHoverColour | RGB values, Colour Hex, String |  |
| mainMenuButtonsTextColour | RGB values, Colour Hex, String |  |
| mainMenuButtonsFont | String |  |
| mainMenuButtonsFontSize | Int |  |
| returnToMenuButtonSizeX | Float |  |
| returnToMenuButtonSizeY | Float |  |
| returnToMainMenuButtonPosX | Float |  |
| returnToMainMenuButtonPosY | Float |  |
| returnToMainMenuButtonColour | RGB values, Colour Hex, String |  |
| returnToMainMenuButtonsHoverColour | RGB values, Colour Hex, String |  |
| returnToMainMenuButtonsTextColour | RGB values, Colour Hex, String |  |
| returnToMainMenuButtonFont | String |  |
| returnTMainMenuButtonFontSize | Int |  |

# Dungeon Run Storyboard

# 

# Dungeon Run Evaluation of solution

Complete design specifications:

* The game has a limited map, but the limited maps space is larger than the window, so the game can have side scrolling mechanics.
* Is coded with object oriented programming.

Incomplete design specifications:

* The game has enemies have behaviours that change. E.g. switching from following the player to stopping to shoot.
* Simple UI at the bottom of the screen displaying health and mana.
* Has a tutorial that clearly explains how to play and what the goal is.
* The game is short and can be completed in under 5 minutes.