# ECS414U/A Miniproject form

Queen Mary University of London

2021/22

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| Name | Benediktas Sapezinskas |
| Student ID | 200270003 |
| Submitted file name | miniproject |
| Level of this program (1, 2, 3, Extra) | 3 |

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| Brief description of the program. Write the chosen theme and a high-level overview of the features (two or three sentences should suffice). |
| Simple endless adventure game, player progresses between stages increasing in difficulty, once the players health reaches 0 they lose. They have the option of attacking or blocking, will fight a random enemy each stage, level up once they reach enough exp. Has a save game feature which they can use in between stages. |

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| List all your source code files, and briefly describe their roles. Add as many rows as necessary. Mark the main file used for compilation in bold. | |
| File name | Description |
| **Main.java** | Used to run the program Holds method to create the correct windowsize, aswell as getter and setter methods. |
| Character.java | Superclass of Enemy and Player, holds general variables as well as getter and setter methods. |
| Player.java | Holds variables tracking the level they are, how much exp, and what stage they are on. Holds methods to attack and block aswell as to gain EXP and level up. |
| Enemy.java | Subclass of Character, holds attack method and tracks if player is blocking or not. |
| Orc.java | Subclass of Enemy holds attack method, through polymorphism.  Has a constructor which gives it specific stats. |
| Elf.java | Subclass of Enemy holds attack method, through polymorphism.  Has a constructor which gives it specific stats. |
| Gremlin.java | Subclass of Enemy holds attack method, through polymorphism.  Has a constructor which gives it specific stats. |
| EnemyArrayList.java | Class containing array list of type Enemy, holds a method to pick a random enemy from the list. |
| startFrame.java | Class holds frame of starting window, used to display starting window which takes a user input, and creates a new player object. Constructor is called when the program starts. |
| menuFrame.java | Class holds frame of menu window, used to display menu. Gives player options to Start game, view tutorial, or exit the game. Constructor is called once the name has been submitted in startFrame. Also holds a method load(), which is called when the continue button is pressed, reads the save game file and allows player to continue from previous save. |
| PopUp.java | Class holds information on how to play game, Constructor is called when Tutorial is selected from the main menu. |
| gameFrame.java | Holds main gameplay. Gives player options of attacking or blocking, each time they do the enemy attacks too. If enemy health drops to 0, a new choiceFrame() object is created, if player health drops to 0, a new resetFrame() object is created. |
| choiceFrame.java | If player completed the stage this class is used. Holds methods to heal or gain exp. Also holds method to save the current player object to a file and return the player to main menu. |
| retryFrame.java | When called shows the ending stats of the player, then gives player option to return to main menu or exit the game. |
| saves | Folder which holds file “saveGame”, used to save/load Player object . |

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| Class diagram, in the format specified in the instructions. |
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| Usage instructions. Describe briefly what features are available to the user and how to use them. If File I/O is used, list and describe the files involved. |
| User is able to play the game, game increase in difficulty infinitely. I/O used to read and write the save game file. Method save() in class choiceFrame can be called to save the Player object to the file saveGame. When load() is called in class menuFrame we read the file saveGame and create a new choiceFrame() object with the variables held in the player object. |

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| Other comments. |
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