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Pythonists

November 26, 2022

PYTHON COMBAT

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- Avadhoot Gorakh Jadhav

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Code Editor

- Used CodeMirror library for code editor
- Import files to editor using javascript FileReader and functions
- Syntax Highlighting using Code Mirror themes, modes, addons
- Autocompletions by adding key-words for functions used and CodeMirror Hints

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5 Levels

We implemented 5 different levels of battles involving different concepts of python programming:

01 **Python Variables**

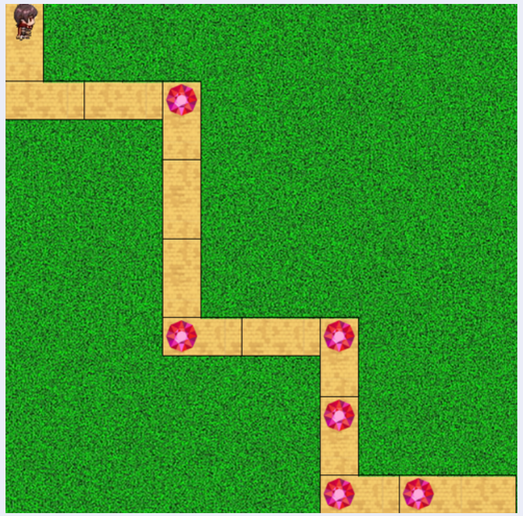
02 **Conditional Statements (if-else)**

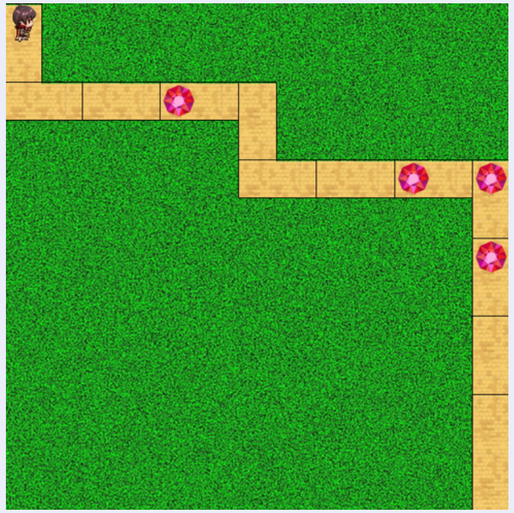
03 **Loops (for, while)**

04 **Functions**

05 **Using Lists in Python**

Level 1 Preview





The placements of objects in each level changes on reloading, i.e. Dynamic placements of objects as shown above for level 1

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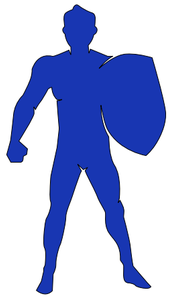
Level Features

- Each level has different Arena
- Proper exceptions handling. If warrior is expected to be going out of arena, then error message is displayed
- LOGGER:

1. Each level has a logger
2. It displays result of battle to user, that is success/failure
3. Can be used to print statements as well for debugging

- The instructions of the battle are also present on the level window
- Each level has a tutorial before entering into the battle
- This tutorial is meant to teach some basic concepts that will be used to fight the battle



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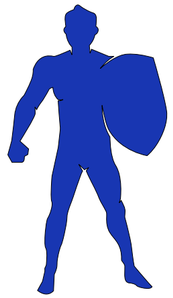
Extra Features

- HINTS:
- Made a Hint Button also that helps user by providing a clue for thinking about the code and solving problem
- LOGGER:
- The Logger detects the error in code as well and displays the error also along with success/failure status of user's game

- SPEED CONTROLLER:
- Added Speed Controller Buttons that control the movement speed of the warrior, from slow, medium to fast
- UNIQUE THEME/CONGRATS MESSAGE:
- The levels are based on a unique storyline and at end of 5th level, a congrats page appears regarding completing the theme story, that leads again to home page



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Python in Browser

- Used Brython Javascript Library for running python
- Used jQuery for animations of the arena
- All Python Functions were mapped to JavaScript functions using Brython

Documentation

- Used Doxygen for documentation of javascript files
- Extra: Used doxygen-awesome-css theme for more beautiful documentation of Project
- Modified Doxyfile with js keyword so as to include javascript documentation
- Report is also produced in latex using Doxygen

Work Distribution

- Atishay - Code Editor, Tutorial Slides, UI/Frontend, Storyline Theme
- Megh - Working of arena, Backend, Level 1, Level 2, Level 5, Animations
- Avadhoot- Arena's Design & Theme, Logger, Backend, Level 3, Level 4

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Thank You!

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