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BITSian Hangman – using JAVA

# Project Description

The BITS Pilani Hyderabad Campus version of Hangman: with a GUI and several add-on features to enhance the player’s gaming experience.

All the phrases are related to BITS Pilani Hyderabad Campus.

It is a game where the player guesses the word or phrase one letter at a time, and with each incorrect letter guessed, the player progresses one step towards death. If the player fails to guess the word/phrase within a stipulated number of tries, the hangman dies and the game is over. The score of the player is calculated according to the number of words/phrases correctly guessed before failing.

The game is a GUI that will be coded in JAVA, and will be wrapped with an installer with instructions, for users.

# Installation and Usage

The player has to download the executable installation file (.exe), and follow the clickable instructions to install the game in their computer.

* The player will be able to type the word/phrase either using their keyboard or by clicking on the letters on-screen.
* The player will able to choose the mode to play in.

# Features

## Modes

* Based on Number of players (Against the computer/Multiplayer)
* Based on Difficulty (Easy/Medium/Hard)
* Based on Time

### Based on Number of Players

**SINGLE PLAYER**:

Player plays against randomly chosen words/phrases.

**MULTI PLAYER:**

Player 1 enters a phrase, and player 2 attempts to guess it.

### Based on Difficulty

**EASY:** Clues related to the word shall be given.

**DIFFICULT**: No clues shall be given to make it more challenging. As the player moves on the number of wrong guesses available decreases to increase the difficulty level.

### Based on Time

**CLASSIC:**

No time limit. Game ends when the player has guessed 7 wrong letters.

**TIMED:**

The player would lose if they are unable to guess the word within the stipulated time, even though they have not used up their guesses.

# Macintosh HD:Users:kavya:Desktop:Modes.png

## Word Categories



## Clues

The player is allowed max 2 letter clues per every word/phrase to be guessed. Each letter clue will reveal a random letter in the word/phrase. Using the clues would result in penalty and hence a slightly decreased score for guessing that word/phrase. But the clues would be a worthy risk for it is better to make it into the next round with a reduced score than to not end the streak, and hence the game.

## Badges:

The player can unlock these badges by playing more.

The badges are to encourage the users to spend more time on the game, by providing challenges.

Here are some of the ways to win a badge:

Guessing 10 words correctly

Guessing 25 words correctly

Guessing 50 words correctly

Guessing 100 words correctly

Guessing all words correctly

Guessing each category

Guessing all categories

Unlocking secret combinations of words formed by guessing certain characters in sequence

BITS

BPHC

LEAD from ACHIEVE, LEAD, INNOVATE

Etc.

## Game Stats

Total played time:

Total deaths:

Total words guessed:

% Finished:

Personal Best Score:

## Animation

To make the game attractive and player-friendly, pop-up messages appear on the screen at different points of the game. As the player advances into the game, he/she is bound to see the following messages pop up:

“Sorry! Game over! You failed to save your fellow BITSian”

“Great job! You’re skipping to the next round!”

“Great job! You managed to scrape through this round!”

“Keep going! Play your luck!”

“Congrats! You made it into the Hall of Fame!”

“Sorry! You’re not offline. Try again later, to access the Hall of Fame”

## Music and Sound Effects

The player can optionally turn on the music, which plays throughout the game.

Sound and music effects are also introduced at marked points of the game, for instance:

When the player has only 1 guess left

When the player loses the game

When the player passes to the next round

The title track - when the player is in the menus

General music during game duration

## Scoring

To keep track of a player’s progress in a game, we use scores. Scores also help in ranking and stats. High Scores of the game are accessible to players at any time, when they are online.

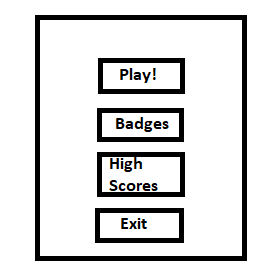
Scoring Mechanism:

* Each word/phrase correctly guessed fetches 100 points.
* The score adds up until the game ends when the player fails to guess the word or phrase in the stipulated amount of trials.
* Player will be partially awarded for the last partially guessed word.

|  |  |
| --- | --- |
| **Action** | **Points** |
| **Entirely right** | 100 |
| **Partially right** | % Of word correctly guessed |

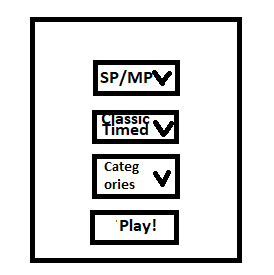
## Some features of the Graphical User Interface (GUI)

* The first screen will show the menu.
* While playing the game, the player can use their keyboard to type in the letter they wish to guess, or click on the letter in the GUI. If the guessed letter is not in the word/phrase, it is crossed out and there is a beep sound, else the position of the letter in the word/phrase is revealed.
* The hangman picture shown here is only for reference, in the game, the hangman will be interactively displayed using animations.



The first screen will show the main menu containing the “Play”, “Badges”, “High Scores” and “Exit” options.

The player can choose the modes and the categories from the drop down lists, and click on Play to begin the game.



# Constraints and Limitations

The user will have the option of muting and unmuting the sound and/or the music at any point of the game.

We are not using an algorithm that fairly demarcates the difficulty levels of the words generated.  
The game constructed is restricted to words that only contain A-Z. It will not work with hyphenated, alphanumeric, numeric, or words containing apostrophes. Limitations included in the game are the limited word base.

# Conclusion

A taste of the traditional hangman modified for the ideal BITSian with updated comfortable and personalized options, suited to challenge a BITSian, made using JAVA.