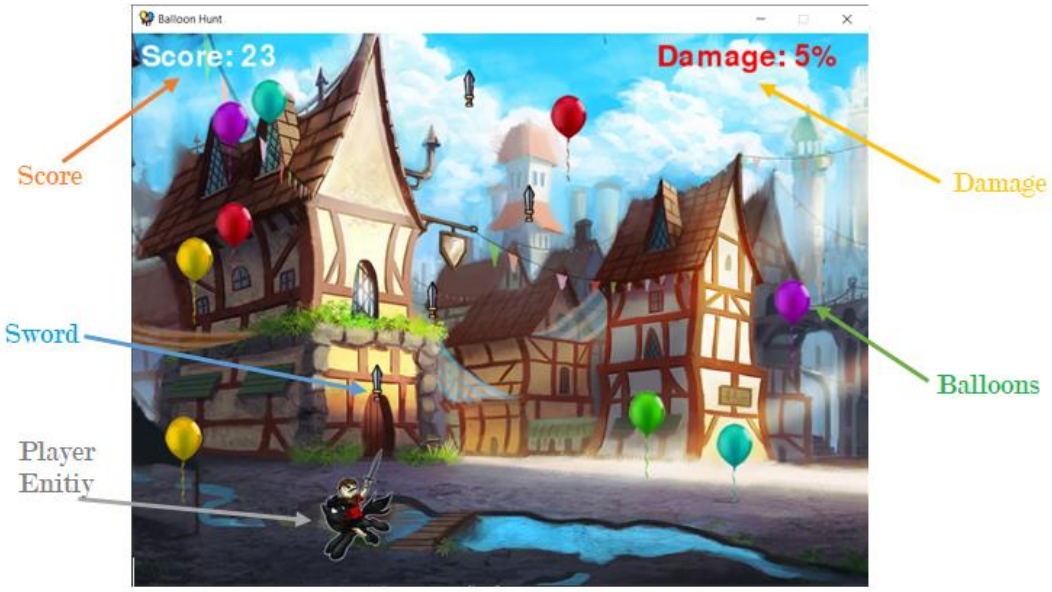
# Mock Project

Developer: Hrishikesh Shinde

# Game: Balloon Hunt

## 1. Introduction

Balloon Hunt is single player game developed using Pygame cross-platform set of Python modules. In this game player have to pop the balloons using the sword. Multiple swords can be fired to pop multiple balloons at a time. Each balloon pop will add up +1 point to the score. If player miss a single balloon then +5% damage will be added. Avoid reaching 100% damage. If 100% damage is reached then game will be over.

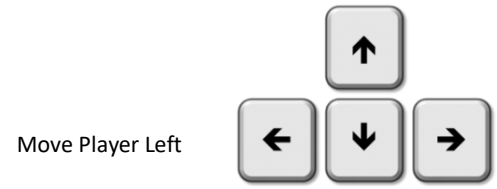



Score is visible on top left corner of the window and damage is visible on the top right corner of the window. If you score more than your previous score then your highest score and rank will be updated. If you score less than you previous score then your highest score and rank will not be altered. You can challenge your friends and beat each other's score. At last, your rank and score position with respect to other player will be shown as a point on a graph. Play Hard, Clash on now!! Also enjoy the game music and amazing sound effects.

## 2. How To Play

Player can move left and right using ⬅ left and right ➡ arrow buttons on 'Keyboard'.

Press and release the buttons continuously to move.
Player can fire sword upwards using ‘Space’ button on keyboard. You can fire multiple swords by continuously pressing the key.

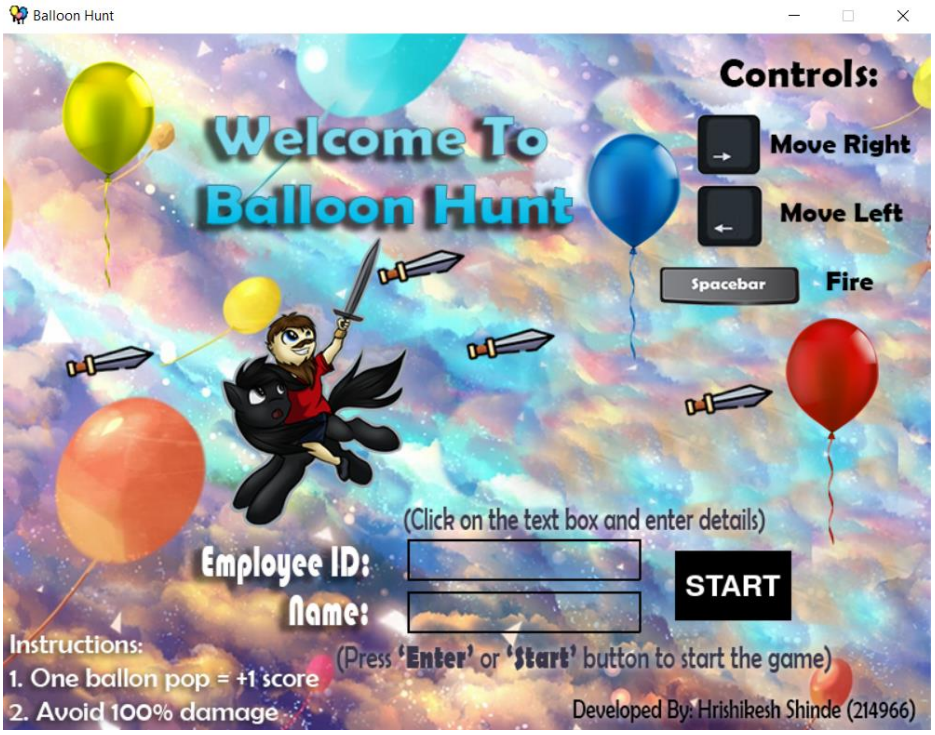




Fire Sword

# 3. Game Login Screen:

Player have to input his employee ID and name to play the game.



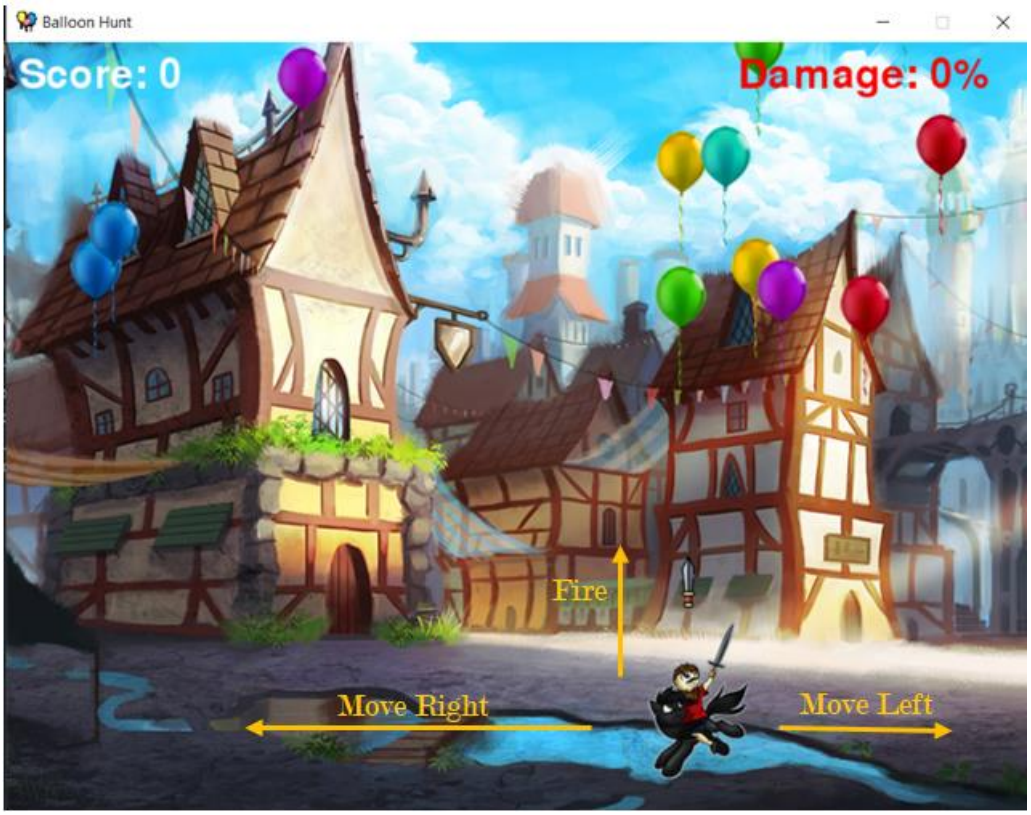

User can easily enter his credentials by clicking on the text box. User should use keyboard keys to type the credentials. After entering the credentials player can start the game by pressing ‘START’ button on the screen or ‘Enter’ button on the keyboard.

If user have previously played the game then if his new score is more than previous score than his highest score and rank will be updated in the file. If new score is less than previous score then his highest score and rank will remain unaltered.

# 4. Score and Damage

One balloon pop get +1 score, one balloon fall on ground get 5% damage. Avoid 100% damage. If you reach 100% damage then game over.

# 5. Game Play Screen




Speed of the balloons increases when your score increase. Use your brain + skills to score more. One sword can pop one balloon.

**Logic Behind:**

The coordinates of the player entity changes when player press the left and right arrow key.

When player press space button on keyboard the sword is fired from the current x, y coordinates of the player. The sword y coordinate continuously decrease. When it became 0 the sword disappears.

Balloon y coordinate continuously increase. When it reaches 600, the balloon is again re-spawned at random above the screen where y<0.

Program monitors the X-axis and Y-axis of sword and balloon. If the distance between both is less than 50 pixels then the balloon is popped.

## 6. Game Over Screen


Here new score, player rank, player highest score and top 5 players with highest score are displayed. When player scored 137 he came in top 5. The Leader Board got updated.

# 7. Leader Board

Complete leader board is stored in .csv file. It includes all the data of the player.
Data included in .csv file (leader board)

1. Rank of the player.
2. ID of the player.
3. Name of the player
4. Highest score of the player
5. Date on which the player played.

*Top 5 players with highest score are displayed on the game over screen as shown above in game over screen.*

**Logic Behind:**

If the file is not present on the system. The program will create a new .csv file when first player plays the game.

If file is present in the system the program will read the data from the file and store it in data frame.

The code will look over the ID of the player whether it's previously present in .csv (lead board) or not. If ID is not present then he's a new player. If ID is present then he's a old player.

A. If new player plays the game:

   The data of the new player will be appended at the end of data frame (leader board). The completed lead board will be sorted in descending order with respect to score. Then, only the rank column will be sorted without altering other columns.

B. If old player plays again:

   If the previous score is small than new score. Then his highest score will get updated in the leader board. Also, the date on which he scored the high score will be changed and the rank will be updated.
   If the previous score is higher than the new score. Then his highest score and rank will remain unaltered.

Complete leader board is available in ‘Player_Data.csv’ file. Also, it’s been printed on the console as shown below.

1. Printed on Console:

| | Rank | ID | Name | Score | Date |
|---|---|---|---|---|---|
| 0 | 1 | 214966 | Hrishikesh | 166 | 30/07/2020 |
| 1 | 2 | 214755 | Harshal | 138 | 28-07-2020 |
| 2 | 3 | 299875 | Rahul | 137 | 30/07/2020 |
| 3 | 4 | 275485 | Yash | 134 | 30-07-2020 |
| 4 | 5 | 2547811 | Aishwarya | 128 | 30/07/2020 |
| 5 | 6 | 2789451 | Deep | 125 | 26-07-2020 |
| 6 | 7 | 258647 | Rohit | 122 | 30-07-2020 |
| 7 | 8 | 214785 | Ruturaj | 117 | 30-07-2020 |
| 8 | 9 | 217582 | Santosh | 112 | 30-07-2020 |
| 9 | 10 | 214874 | shubham | 107 | 27-07-2020 |
| 10 | 11 | 224578 | Suraj | 107 | 28-07-2020 |
| 11 | 12 | 2147556 | Deven | 104 | 30-07-2020 |
| 12 | 13 | 264864 | Snehal | 99 | 30-07-2020 |
| 13 | 14 | 264871 | Sharukh | 98 | 26-07-2020 |
| 14 | 15 | 214917 | Gourav | 96 | 30-07-2020 |
| 15 | 16 | 287954 | Ashok | 94 | 27-07-2020 |
| 16 | 17 | 217588 | Yash | 89 | 26-07-2020 |
| 17 | 18 | 264875 | Varun | 88 | 28-07-2020 |
| 18 | 19 | 264861 | Pratik | 88 | 30-07-2020 |
| 19 | 20 | 264866 | Neha | 88 | 28-07-2020 |
| 20 | 21 | 264876 | Alia | 85 | 30-07-2020 |
| 21 | 22 | 264872 | Amir | 78 | 30-07-2020 |
| 22 | 23 | 264858 | Ragav | 78 | 27-07-2020 |
| 23 | 24 | 264865 | Vedika | 78 | 28-07-2020 |
| 24 | 25 | 264877 | Sushant | 77 | 30-07-2020 |
| 25 | 26 | 264874 | Sara | 75 | 28-07-2020 |
| 26 | 27 | 247852 | Ajinkya | 74 | 30-07-2020 |
| 27 | 28 | 214475 | Shubhangi | 70 | 26-07-2020 |
| 28 | 29 | 245876 | Omkar | 61 | 30-07-2020 |
| 29 | 30 | 205687 | Nishant | 60 | 28-07-2020 |
| 30 | 31 | 264882 | Shraddha | 58 | 30-07-2020 |
| 31 | 32 | 264857 | Rakesh | 56 | 30-07-2020 |
| 32 | 33 | 264867 | Swati | 55 | 26-07-2020 |
| 33 | 34 | 2148544 | Sudeep | 55 | 30-07-2020 |
| 34 | 35 | 214752 | Akshay | 51 | 30-07-2020 |
| 35 | 36 | 264873 | Deepika | 50 | 27-07-2020 |
| 36 | 37 | 264870 | Saif | 49 | 30-07-2020 |
| 37 | 38 | 264869 | Kareena | 48 | 30-07-2020 |
| 38 | 39 | 264868 | Smiral | 46 | 28-07-2020 |
| 39 | 40 | 264859 | Namrata | 45 | 30-07-2020 |
| 40 | 41 | 264863 | Priti | 45 | 30-07-2020 |
| 41 | 42 | 264878 | Prashant | 44 | 30-07-2020 |
| 42 | 43 | 475825 | Prasad | 44 | 30-07-2020 |
| 43 | 44 | 2784551 | Prajwal | 42 | 30-07-2020 |
| 44 | 45 | 245865 | Tushar | 39 | 28-07-2020 |
| 45 | 46 | 264856 | Prasad | 33 | 26-07-2020 |
| 46 | 47 | 224756 | Akash | 33 | 30-07-2020 |
| 47 | 48 | 234578 | Akshay | 29 | 27-07-2020 |
| 48 | 49 | 415485 | Supriya | 27 | 30-07-2020 |
| 49 | 50 | 214759 | Ketan | 26 | 30-07-2020 |
| 50 | 51 | 247862 | Dhruv | 25 | 28-07-2020 |
| 51 | 52 | 264881 | Kushboo | 16 | 26-07-2020 |
| 52 | 53 | 264862 | Swetha | 16 | 30-07-2020 |
| 53 | 54 | 264880 | Dheeraj | 13 | 27-07-2020 |

2. In .csv file:

| | A | B | C | D | E |
|---|---|---|---|---|---|
| 1 | Rank | ID | Name | Score | Date |
| 2 | 1 | 214966 | Hrishikesh | 166 | 30-07-2020 |
| 3 | 2 | 214755 | Harshal | 138 | 28-07-2020 |
| 4 | 3 | 299875 | Rahul | 137 | 30-07-2020 |
| 5 | 4 | 275485 | Yash | 134 | 30-07-2020 |
| 6 | 5 | 2547811 | Aishwarya | 128 | 30-07-2020 |
| 7 | 6 | 2789451 | Deep | 125 | 26-07-2020 |
| 8 | 7 | 258647 | Rohit | 122 | 30-07-2020 |
| 9 | 8 | 214785 | Ruturaj | 117 | 30-07-2020 |
| 10 | 9 | 217582 | Santosh | 112 | 30-07-2020 |
| 11 | 10 | 214874 | shubham | 107 | 27-07-2020 |
| 12 | 11 | 224578 | Suraj | 107 | 28-07-2020 |
| 13 | 12 | 2147556 | Deven | 104 | 30-07-2020 |
| 14 | 13 | 264864 | Snehal | 99 | 30-07-2020 |
| 15 | 14 | 264871 | Sharukh | 98 | 26-07-2020 |
| 16 | 15 | 214917 | Gourav | 96 | 30-07-2020 |
| 17 | 16 | 287954 | Ashok | 94 | 27-07-2020 |
| 18 | 17 | 217588 | Yash | 89 | 26-07-2020 |
| 19 | 18 | 264875 | Varun | 88 | 28-07-2020 |
| 20 | 19 | 264861 | Pratik | 88 | 30-07-2020 |
| 21 | 20 | 264866 | Neha | 88 | 28-07-2020 |
| 22 | 21 | 264876 | Alia | 85 | 30-07-2020 |
| 23 | 22 | 264872 | Amir | 78 | 30-07-2020 |
| 24 | 23 | 264858 | Ragav | 78 | 27-07-2020 |
| 25 | 24 | 264865 | Vedika | 78 | 28-07-2020 |
| 26 | 25 | 264877 | Sushant | 77 | 30-07-2020 |
| 27 | 26 | 264874 | Sara | 75 | 28-07-2020 |
| 28 | 27 | 247852 | Ajinkya | 74 | 30-07-2020 |

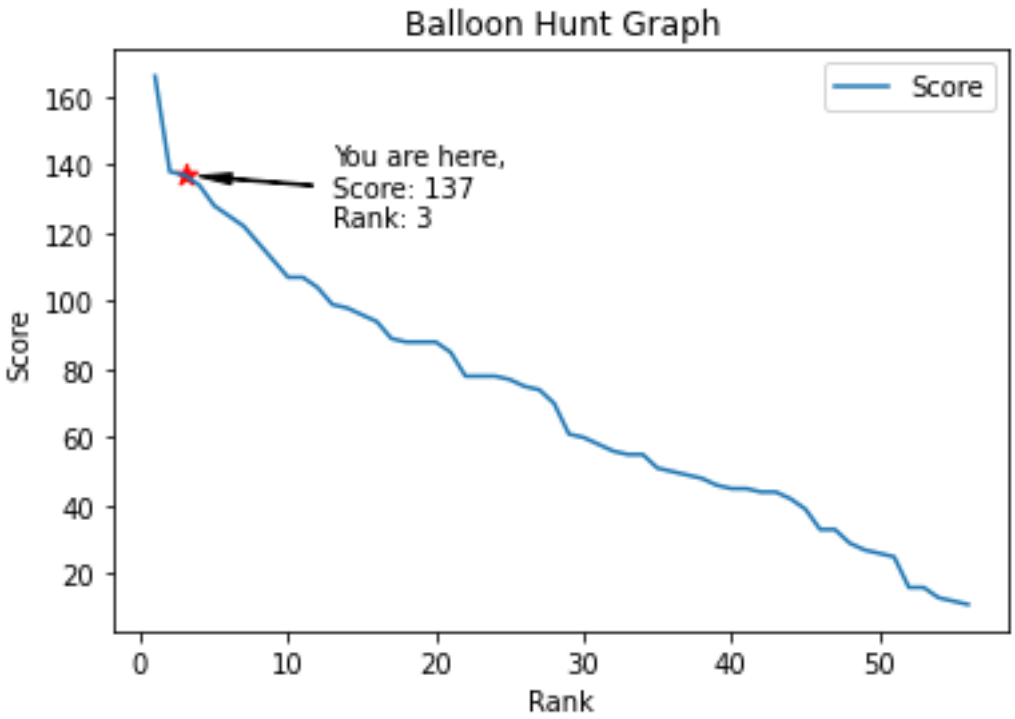
| | A | B | C | D | E |
|---|---|---|---|---|---|
| 29 | 28 | 214475 | Shubhangi | 70 | 26-07-2020 |
| 30 | 29 | 245876 | Omkar | 61 | 30-07-2020 |
| 31 | 30 | 205687 | Nishant | 60 | 28-07-2020 |
| 32 | 31 | 264882 | Shraddha | 58 | 30-07-2020 |
| 33 | 32 | 264857 | Rakesh | 56 | 30-07-2020 |
| 34 | 33 | 264867 | Swati | 55 | 26-07-2020 |
| 35 | 34 | 2148544 | Sudeep | 55 | 30-07-2020 |
| 36 | 35 | 214752 | Akshay | 51 | 30-07-2020 |
| 37 | 36 | 264873 | Deepika | 50 | 27-07-2020 |
| 38 | 37 | 264870 | Saif | 49 | 30-07-2020 |
| 39 | 38 | 264869 | Kareena | 48 | 30-07-2020 |
| 40 | 39 | 264868 | Smiral | 46 | 28-07-2020 |
| 41 | 40 | 264859 | Namrata | 45 | 30-07-2020 |
| 42 | 41 | 264863 | Priti | 45 | 30-07-2020 |
| 43 | 42 | 264878 | Prashant | 44 | 30-07-2020 |
| 44 | 43 | 475825 | Prasad | 44 | 30-07-2020 |
| 45 | 44 | 2784551 | Prajwal | 42 | 30-07-2020 |
| 46 | 45 | 245865 | Tushar | 39 | 28-07-2020 |
| 47 | 46 | 264856 | Prasad | 33 | 26-07-2020 |
| 48 | 47 | 224756 | Akash | 33 | 30-07-2020 |
| 49 | 48 | 234578 | Akshay | 29 | 27-07-2020 |
| 50 | 49 | 415485 | Supriya | 27 | 30-07-2020 |
| 51 | 50 | 214759 | Ketan | 26 | 30-07-2020 |
| 52 | 51 | 247862 | Dhruv | 25 | 28-07-2020 |
| 53 | 52 | 264881 | Kushboo | 16 | 26-07-2020 |
| 54 | 53 | 264862 | Swetha | 16 | 30-07-2020 |
| 55 | 54 | 264880 | Dheeraj | 13 | 27-07-2020 |

# 8. Graph

The graph is plotted rank vs. score.
X-axis = rank, y-axis = score.

**Logic Behind:**

Using matplotlib the graph is plot and then saved on the disk.
The current position of the player is marked with '*' marker.
The saved graph is again rendered/displayed as image on game over screen.




## 9. Code Snippet:

```
 # -*- coding: utf-8 -*-
"""
Created on Sun Jul 26 12:48:59 2020

@author: Hrishikesh Shinde (214966)

GAME : BALLOON HUNT

"""
#included libraries
import pygame
import math
import pandas as pd
import random
import os
import matplotlib.pyplot as plt
import sys

#initializing pygame
pygame.init()

#creating window
screen = pygame.display.set_mode((800,600))

#Caption and Icon
pygame.display.set_caption("Balloon Hunt")
icon = pygame.image.load('balloon icon.png')
pygame.display.set_icon(icon)

#background_sound
pygame.mixer.music.load('background_music.mp3')
pygame.mixer.music.play(-1)

#background Image
background = pygame.image.load('background_image.jpg')
login_background = pygame.image.load('Login Page.jpg')
game_over_image = pygame.image.load('gameover.jpg')

#Player Entity
playerImg = pygame.image.load('player_icon.png')
playerX = 370
playerY = 450
playerX_change = 0

"""
#single enemy
```

```
enemyImg = pygame.Enemyimage.load('Single_Blue_Balloon_Image_icon.png')
enemyX = random.randint(0,710)
enemyY = random.randint(-400,0)
enemyX_change = 0
enemyY_change = +2
"""


#Enemy Entity (Balloon)
enemyImg = []
enemyX = []
enemyY = []
enemyX_change = []
enemyY_change = []
number_of_balloon = 12
enemyImg.append(pygame.image.load('Single_Blue_Balloon_Image_icon.png'))
enemyImg.append(pygame.image.load('Single_Yellow_Balloon_Image_icon.png'))
enemyImg.append(pygame.image.load('Single_Purple_Balloon_Image_icon.png'))
enemyImg.append(pygame.image.load('Single_Red_Balloon_Image_icon.png'))
enemyImg.append(pygame.image.load('Single_Cyan_Balloon_Image_icon.png'))
enemyImg.append(pygame.image.load('Single_Green_Balloon_Image_icon.png'))
enemyImg.append(pygame.image.load('Single_Blue_Balloon_Image_icon.png'))
enemyImg.append(pygame.image.load('Single_Yellow_Balloon_Image_icon.png'))
enemyImg.append(pygame.image.load('Single_Purple_Balloon_Image_icon.png'))
enemyImg.append(pygame.image.load('Single_Red_Balloon_Image_icon.png'))
enemyImg.append(pygame.image.load('Single_Cyan_Balloon_Image_icon.png'))
enemyImg.append(pygame.image.load('Single_Green_Balloon_Image_icon.png'))
for i in range(number_of_balloon):
    enemyX.append(random.randint(0,710))
    enemyY.append(random.randint(-400,0))
    enemyX_change.append(0)
    enemyY_change.append(0.2)



#Sword
#ready- sword not visible
#fire - seen
"""
#single sword
swordImg = pygame.image.load('sword.png')
swordX = 0
swordY = 480
swordX_change = 0
swordY_change = 3
sword_state = "ready"
"""

#multiple Swords
```

```
swordImg = []
swordX = []
swordY = []
swordX_change = []
swordY_change = []
number_of_swords=7
sword_state = []

for i in range(number_of_swords):
    #fire - seen
    swordImg.append(pygame.image.load('sword.png'))
    swordX.append(0)
    swordY.append(450)
    swordX_change.append(0)
    swordY_change.append(5)
    sword_state.append("ready")

# to display player entity on pygame window
def player(x,y):
    screen.blit(playerImg,(x,y))

# to display player on py game window
def enemy(x,y,i):
    screen.blit(enemyImg[i],(x,y))

# to launch/display the swords pygame window
def launch_sword(x,y,num):
    global number_of_swords
    global sword_state
    sword_state[num]= "fire"
    #print(sword_state)
    for n in range (number_of_swords):
        #print(sword_state)
        #print(n)
        if sword_state[n]=="fire":
           # print (f"Sq no {num}")
           #print(swordY)
           screen.blit(swordImg[n],(x+16,y+10))

#to detect collision of sword and balloon
def isCollision(enemyX,enemyY,swordX,swordY):
    distance = math.sqrt(math.pow(enemyX-5-swordX,2)+math.pow(enemyY-
swordY,2))
    if distance <50:
        return True
    else:
        return False
```

```
font = pygame.font.Font('freesansbold.ttf',32)
textX = 10
textY = 10
DtextX = 570
DtextY = 10

# to display score on pygame window while playing
def show_score(x,y):
    global score_value
    score = font.render("Score: "+str(score_value),True,(255,255,255))
    screen.blit(score,(x,y))

# to display damage on pygame window while playing
def show_damage(x,y):
    global damage_value
    damage = font.render("Damage: "+str(damage_value)+"%",True,(255,0,0))
    screen.blit(damage,(x,y))

score_value = 0
damage_value = 0

#game over
over_font = pygame.font.Font('freesansbold.ttf',45 )
prev_font = pygame.font.Font('freesansbold.ttf',25 )
csv_flag = True
leaderboard_font = pygame.font.Font('freesansbold.ttf',20)
def game_over():
    global csv_flag
    global player_data
    screen.blit(game_over_image,(0,0))
    graph = pygame.image.load('graph.jpg')
    screen.blit(graph,(450,120))
    if csv_flag:
        check_csv()
        update_csv()
        csv_flag = False
    display_leaderboard()

# displaying leaderboard on pygame window
def display_leaderboard():
    global score_value
    global player_data
    prev_score = prev_font.render(str(player_data['Score'][return_rank()-
1]),True,(255,255,255))
    screen.blit(prev_score,(325,240))

    score = over_font.render(str(score_value),True,(255,255,255))
```

```
    screen.blit(score,(240,140))
    #print(player_data.dtypes)
    rank = over_font.render(str(return_rank()),True,(255,255,255))
    screen.blit(rank,(240,190))
    leaderboard_title = leaderboard_font.render(str('ID'),True,(255,128,0))
    screen.blit(leaderboard_title,(250,350))
    leaderboard_title = leaderboard_font.render(str('Rank'),True,(255,0,127))
    screen.blit(leaderboard_title,(400,350))
    leaderboard_title = leaderboard_font.render(str('Name'),True,(255,255,0))
    screen.blit(leaderboard_title,(500,350))
    leaderboard_title = leaderboard_font.render(str('Score'),True,(0,255,0))
    screen.blit(leaderboard_title,(700,350))

    #screen.blit(playerImg,(x,y))
    x=player_data['Rank'].count()
    if x<5:
        x=x=player_data['Rank'].count()
    else:
        x = 5

    for i in range(x):

        leaderboard = leaderboard_font.render(str(player_data['ID'][i]),True,(
255,128,0))
        screen.blit(leaderboard,(250,390+i*40))

        leaderboard = leaderboard_font.render(str(player_data['Rank'][i]),True
,(255,0,127))
        screen.blit(leaderboard,(400,390+i*40))

        leaderboard = leaderboard_font.render(str(player_data['Name'][i]),True
,(255,255,0))
        screen.blit(leaderboard,(500,390+i*40))

        leaderboard = leaderboard_font.render(str(player_data['Score'][i]),Tru
e,(0,255,0))
        screen.blit(leaderboard,(700,390+i*40))

#function returns rank of the player
def return_rank():
    global player_data
    global text
    #print()

    rank_counter = 0
    for n in player_data['ID']:
        rank_counter +=1
        if str(n)==str(text):
```

```
            #print(rank_counter)
            return  rank_counter


input_font = pygame.font.Font('freesansbold.ttf',64 )
text = ''
name_text=''
# fuction to take input from pygame windows text box and store the inputs
def user_input():
    screen.blit(login_background,(0,0))
    input_box = pygame.Rect(350, 435, 140, 35)
    input_box1 = pygame.Rect(350, 480, 140, 35)
    button = pygame.Rect(580, 445, 100, 60)
    color_inactive = pygame.Color(0,0,0)
    color_active = pygame.Color(255,0,0)
    color = color_inactive
    color1 = color_inactive
    color2 = color_inactive
    active = False
    active1 = False
    active2 = False
    global text
    global name_text
    done = False

    while not done:
        for event in pygame.event.get():
            #to check any enent has happend or not
            if event.type == pygame.QUIT:
                    pygame.display.quit()
                    pygame.quit()
                    sys.exit()
            #mouse button down event
            if event.type == pygame.MOUSEBUTTONDOWN:
                # If the user clicked on the input_box rect.
                if input_box.collidepoint(event.pos):
                    # Toggle the active variable.
                    active = not active
                else:
                    active = False

                if input_box1.collidepoint(event.pos):
                    active1 = not active1
                else:
                    active1 = False
                if event.button == 1:
                    # `event.pos` is the mouse position.
                    if button.collidepoint(event.pos):
```

```
                    # Increment the number.
                    active2 = not active2
                    done = True
                else:
                    active2 = False
            # Change the current color of the input box.
            color = color_active if active else color_inactive
            color1 = color_active if active1 else color_inactive
            color2 = color_inactive if active2 else pygame.Color(255,0,0)

        #for user input data
        if event.type == pygame.KEYDOWN:
            if active:
                if event.key == pygame.K_RETURN:
                    done = True
                    return text
                elif event.key == pygame.K_BACKSPACE:
                    text = text[:-1]
                    screen.blit(login_background,(0,0))
                    input_box = pygame.Rect(350, 435, 140, 35)
                else:
                    text += event.unicode
            if active1:
                if event.key == pygame.K_RETURN:
                    done = True
                    return name_text
                elif event.key == pygame.K_BACKSPACE:
                    name_text = name_text[:-1]
                    screen.blit(login_background,(0,0))
                    input_box1 = pygame.Rect(350, 480, 140, 35)
                else:
                    name_text += event.unicode
    #to display start button
    pygame.draw.rect(screen, color2, button)
    start_font = pygame.font.Font('freesansbold.ttf',25 )
    text_surf = start_font.render('START', True, (255,255,255))
    # You can pass the center directly to the `get_rect` method.
    text_rect = text_surf.get_rect(center=(630, 477))
    screen.blit(text_surf, text_rect)


    # Render the current text.

    txt_surface = font.render(text, True, color)
    txt_surface1 = font.render(name_text, True, color1)
    # Resize the box if the text is too long.
    width = max(200, txt_surface.get_width()+10)
    width1 = max(200, txt_surface1.get_width()+10)
```

```
        input_box.w = width
        input_box1.w = width1
        # Blit the text.
        screen.blit(txt_surface, (input_box.x+5, input_box.y+5))
        screen.blit(txt_surface1, (input_box1.x+5, input_box1.y+5))
        # Blit the input_box rect.
        pygame.draw.rect(screen, color, input_box, 2)
        pygame.draw.rect(screen, color1, input_box1, 2)
        #print(text)
        #print(name_text)
        pygame.display.flip()

player_data = pd.DataFrame(columns = ['Rank','ID','Name','Score','Date'],index
=None)
# to check whether csv file exists or not
# if exists: then read csv file
# if dosen't create new csv file
def check_csv():
    global player_data
    if os.path.isfile('./Player_Data.csv'):
        player_data = pd.read_csv('Player_Data.csv')
        #print(player_data)
    else:
        player_data.to_csv('Player_Data.csv')
counter = -1

# after game over update the csv file
def update_csv():
    global score_value
    global text
    global counter
    global name_text
    global player_data
    flag = False
    #print(player_data.dtypes)
   # print(f"text Frame {type(text)}")

    counter = -1
    for n in player_data['ID']:
        counter +=1
        if str(n)==str(text):
            #print(counter)
            #print(player_data['Score'][counter])
            flag = True
            if score_value > player_data['Score'][counter]:
                player_data.loc[[counter],'Score']=score_value
                player_data.loc[[counter],'Name']=name_text
                #print(player_data)
```

```
                player_data['Date'][counter]=pd.to_datetime('today').strftime(
"%d/%m/%Y")
            print(score_value)

    if flag == False:
        new_player =pd.DataFrame({'Rank':[player_data['Rank'].count()+1],'ID':
[text],'Name':[name_text],'Score':[score_value],'Date':[pd.to_datetime('today'
).strftime("%d/%m/%Y")]})
        #print(new_player)
        player_data = player_data.append(new_player)
        #print(player_data)
        #rank_replace = pd.DataFrame(player_data['Rank'])
        #print(rank_replace.dtypes)
        #print(rank_replace)
    #player_data['Date'] = pd.to_datetime('today').strftime("%d/%m/%Y")
    player_data = player_data.sort_values(by=['Score'],ascending=False)
    #print(player_data)
    #player_data = player_data.drop(['Rank'],axis=1)
    player_data['Rank'] = player_data['Rank'].sort_values().values
    player_data.to_csv('Player_Data.csv',index=None)
    player_data = pd.read_csv('Player_Data.csv')
    #print(player_data)
        #player_data=pd.concat([rank_replace,player_data],ignore_index= True)

    print(player_data)
    show_graph()
    #print(player_data.index[player_data['ID'] == text].tolist())

#funtion to plot and save the graph on the disk
def show_graph():
    global player_data
    if (player_data['Rank'].count()<=10):
        locx=1
        locy=10
    elif(player_data['Rank'].count()>10 and player_data['Rank'].count()<=50):
        locx = 5
        locy = 10
    elif(player_data['Rank'].count()>50):
        locx = 10
        locy = 15
    if player_data['Score'][return_rank()-1]<40:
        x= return_rank()-locx
        y= player_data['Score'][return_rank()-1]+locy
    else:
        x= return_rank()+locx
        y= player_data['Score'][return_rank()-1]-locy
    arrow_properties = dict(facecolor="black", width=0.5,headwidth=4, shrink=0
.1)
```

```
    #plt.plot(player_data['Rank'],player_data['Score'])
    ax = player_data.plot(x='Rank',y='Score')
    plt.scatter(return_rank(),player_data['Score'][return_rank()-
1],marker='*',s=70,c='r')
    plt.annotate(f"You are here, \nScore: {player_data['Score'][return_rank()-
1]} \nRank: {return_rank()}", xy=(return_rank(),player_data['Score'][return_ra
nk()-1]),xytext=(x,y),arrowprops=arrow_properties)
    ax.locator_params(integer=True)
    plt.xlabel('Rank')
    plt.ylabel('Score')
    plt.title('Balloon Hunt Graph')
    plt.savefig('graph.jpg',dpi=55)
    plt.show()

running = True
sw_no=0
input_cntr=0


#main in game flow
while running:

    #RGB
    pygame.display.update()
    screen.fill((0,0,0))
    #backgorund display
    screen.blit(background,(0,0))
    if(input_cntr==0):
        user_input()
        input_cntr += 1
    for event in pygame.event.get():
        if event.type == pygame.QUIT:
            running = False
            pygame.display.quit()
            pygame.quit()
            sys.exit()
        #keystroke is pressed check weather left or right
        if event.type  == pygame.KEYDOWN:
            if event.key == pygame.K_LEFT:
                playerX_change = -5
            if event.key == pygame.K_RIGHT:
                playerX_change = 5
            if event.key == pygame.K_SPACE:
                sw_no+=1
                if(sw_no==number_of_swords):
                    sw_no=0
                if sword_state[sw_no] is "ready":
                    #sword_sound= mixer.Sound('laser.wav')
                    #bullet_sound.play()
```

```
                    #print(sw_no)
                    swordX[sw_no] = playerX
                    launch_sword(swordX[sw_no],swordY[sw_no],sw_no)


        #keystroke is pressed check weather left or right
        if event.type  == pygame.KEYUP:
            if event.key == pygame.K_LEFT:
                playerX_change = 0
            if event.key == pygame.K_RIGHT:
                playerX_change = 0
            if event.key == pygame.K_SPACE:
                if sw_no!=(number_of_swords-1):
                    swordY[sw_no+1]=450
    if(damage_value>=100):
        game_over()
        continue
    #when balloon goes below screen
    for i in range(number_of_balloon):
        enemyY[i] += enemyY_change[i]
        if enemyY[i]>700:
            damage_value +=5
            enemyX[i] = random.randint(0,710)
            enemyY[i] = random.randint(-400,0)

        enemy(enemyX[i], enemyY[i],i)

        #to detect collision of all swords with all balloon
        for n in range(number_of_swords):
            collision = isCollision(enemyX[i],enemyY[i],swordX[n],swordY[n])
            if collision:
                pop = pygame.mixer.Sound('balloon pop.wav')
                pop.play()
                swordY[n]=450
                swordX[n]=playerX
                sword_state[n]="ready"
                score_value+=1
                enemyY_change[i] +=0.3
                #playerX_change +=0.3
                enemyX[i] = random.randint(0,710)
                enemyY[i] = random.randint(-400,0)
                #print(score_value)


#border for player entity
    playerX += playerX_change
    if playerX <=0:
```

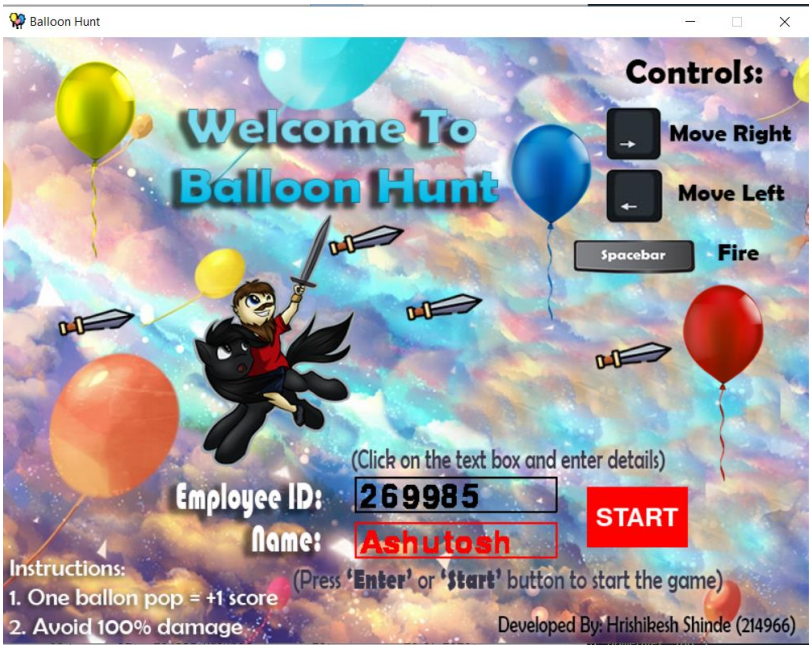
```
        playerX = 0
    elif playerX>=710:
        playerX=710

    #print(swordY)
    for n in range(number_of_swords):
        if swordY[n]<=0:
            swordY[n] = 450
            swordX[n] = playerX
            sword_state[n] = 'ready'

        if sword_state[n] is "fire":
            launch_sword(swordX[n],swordY[n],n)
            swordY[n] -=swordY_change[n]
    #displaying player score and damage while playing game
    player(playerX,playerY)
    show_score(textX,textY)
    show_damage(DtextX, DtextY)
```

#---------- End of code ----------

# 10. UI Artifacts

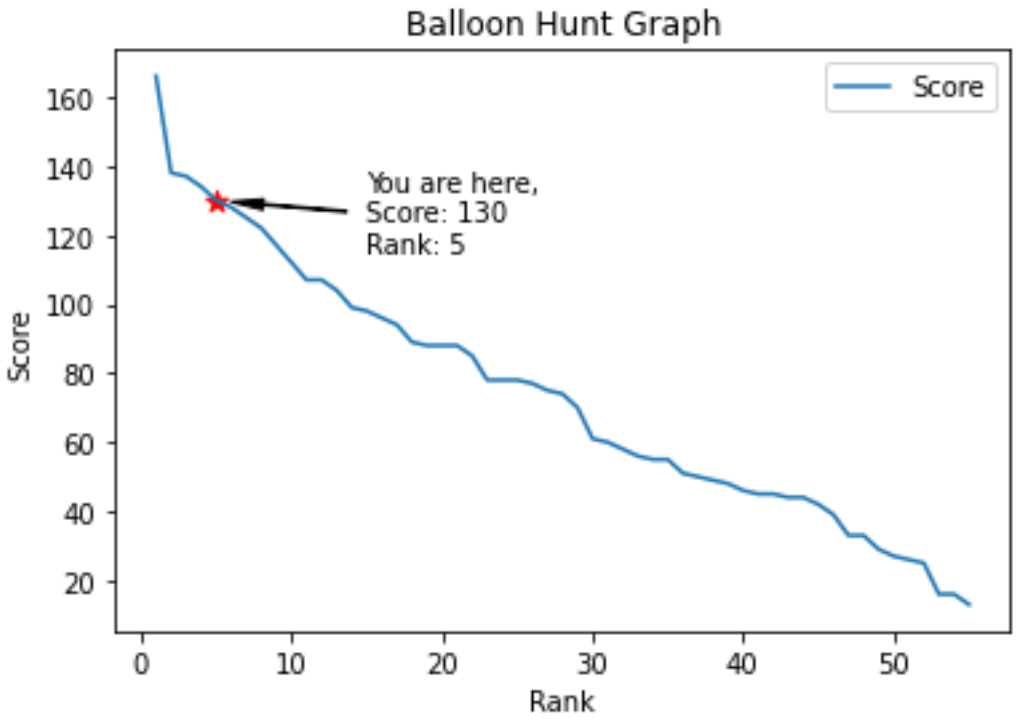
**Case 1:** New Player playing the game

Login: ID: 269985, Name: Ashutosh



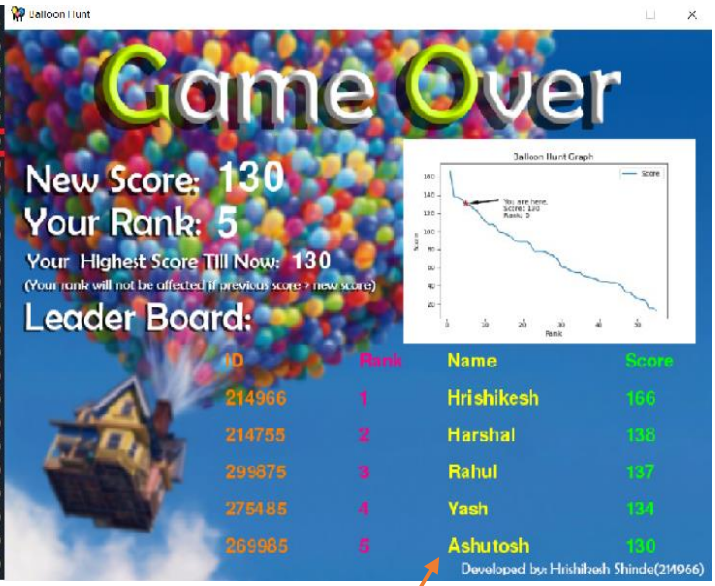

Scored: 130

Graph:




Leader Board:

| | Rank | ID | Name | Score | Date |
|---|---|---|---|---|---|
| 0 | 1 | 214966 | Hrishikesh | 166 | 30-07-2020 |
| 1 | 2 | 214755 | Harshal | 138 | 28-07-2020 |
| 2 | 3 | 299875 | Rahul | 137 | 30-07-2020 |
| 3 | 4 | 275485 | Yash | 134 | 30-07-2020 |
| 4 | 5 | 269985 | Ashutosh | 130 | 31/07/2020 |
| 5 | 6 | 2547811 | Aishwarya | 128 | 30-07-2020 |
| 6 | 7 | 2789451 | Deep | 125 | 26-07-2020 |
| 7 | 8 | 258647 | Rohit | 122 | 30-07-2020 |
| 8 | 9 | 214785 | Ruturaj | 117 | 30-07-2020 |
| 9 | 10 | 217582 | Santosh | 112 | 30-07-2020 |
| 10 | 11 | 214874 | shubham | 107 | 27-07-2020 |
| 11 | 12 | 224578 | Suraj | 107 | 28-07-2020 |
| 12 | 13 | 2147556 | Deven | 104 | 30-07-2020 |
| 13 | 14 | 264864 | Snehal | 99 | 30-07-2020 |
| 14 | 15 | 264871 | Sharukh | 98 | 26-07-2020 |
| 15 | 16 | 214917 | Gourav | 96 | 30-07-2020 |
| 16 | 17 | 287954 | Ashok | 94 | 27-07-2020 |
| 17 | 18 | 217588 | Yash | 89 | 26-07-2020 |
| 18 | 19 | 264866 | Neha | 88 | 28-07-2020 |
| 19 | 20 | 264861 | Pratik | 88 | 30-07-2020 |
| 20 | 21 | 264875 | Varun | 88 | 28-07-2020 |
| 21 | 22 | 264876 | Alia | 85 | 30-07-2020 |
| 22 | 23 | 264872 | Amir | 78 | 30-07-2020 |



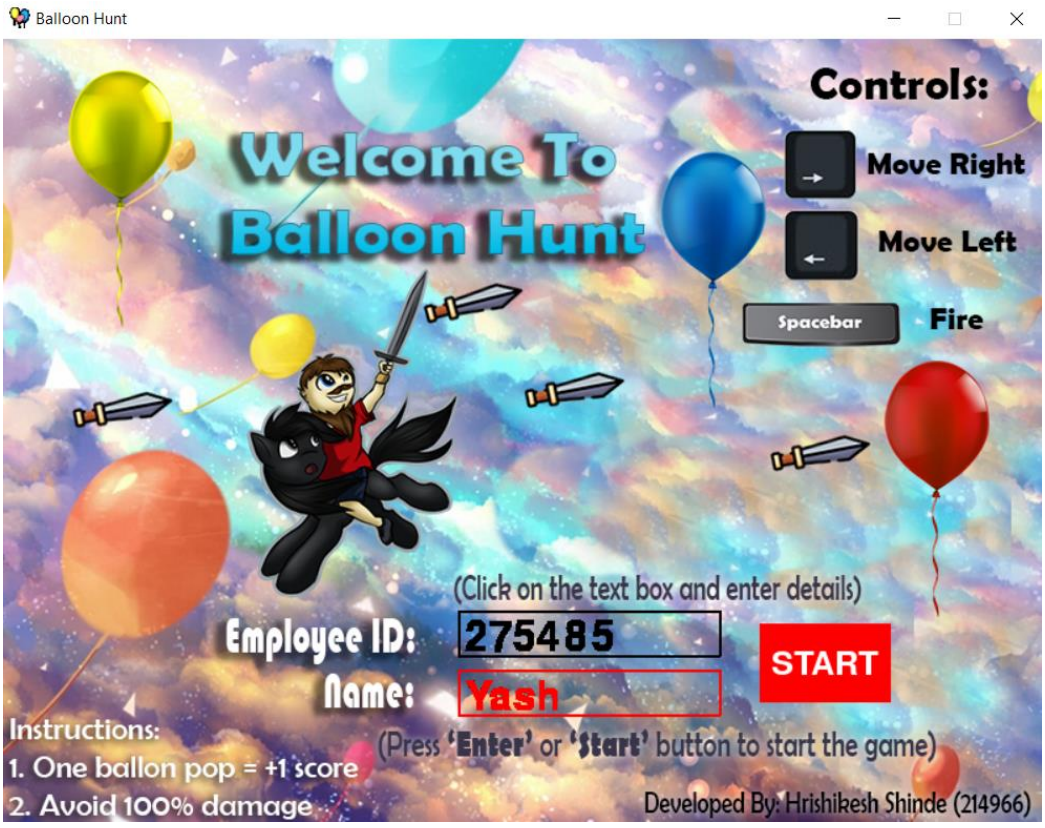
**Case 2:** Old player playing, his new score more than previous played score.

| | Rank | ID | Name | Score | Date |
|---|---|---|---|---|---|
| 0 | 1 | 214966 | Hrishikesh | 166 | 30-07-2020 |
| 1 | 2 | 214755 | Harshal | 138 | 28-07-2020 |
| 2 | 3 | 299875 | Rahul | 137 | 30-07-2020 |
| 3 | 4 | 275485 | Yash | 134 | 30-07-2020 |
| 4 | 5 | 269985 | Ashutosh | 130 | 31/07/2020 |
| 5 | 6 | 2547811 | Aishwarya | 128 | 30-07-2020 |
| 6 | 7 | 2789451 | Deep | 125 | 26-07-2020 |
| 7 | 8 | 258647 | Rohit | 122 | 30-07-2020 |
| 8 | 9 | 214785 | Ruturaj | 117 | 30-07-2020 |
| 9 | 10 | 217582 | Santosh | 112 | 30-07-2020 |
| 10 | 11 | 214874 | shubham | 107 | 27-07-2020 |
| 11 | 12 | 224578 | Suraj | 107 | 28-07-2020 |
| 12 | 13 | 2147556 | Deven | 104 | 30-07-2020 |
| 13 | 14 | 264864 | Snehal | 99 | 30-07-2020 |
| 14 | 15 | 264871 | Sharukh | 98 | 26-07-2020 |
| 15 | 16 | 214917 | Gourav | 96 | 30-07-2020 |
| 16 | 17 | 287954 | Ashok | 94 | 27-07-2020 |
| 17 | 18 | 217588 | Yash | 89 | 26-07-2020 |
| 18 | 19 | 264866 | Neha | 88 | 28-07-2020 |
| 19 | 20 | 264861 | Pratik | 88 | 30-07-2020 |
| 20 | 21 | 264875 | Varun | 88 | 28-07-2020 |
| 21 | 22 | 264876 | Alia | 85 | 30-07-2020 |
| 22 | 23 | 264872 | Amir | 78 | 30-07-2020 |

Old player: ID: 275485, Name: Yash, Previous High Score: 134, Date: 30-07-2020, Rank: 4

Previously displayed Top 5:

Playing Again:




Scored: 143
Previous score and rank got updated:

All the data with date got update when old player scored more than his previous score.

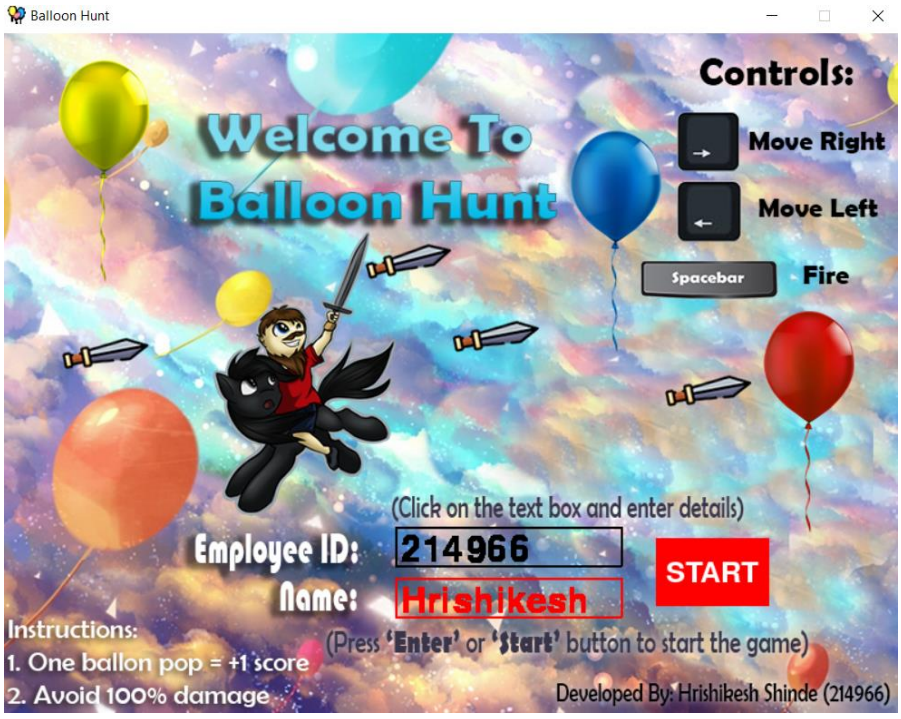
| | Rank | ID | Name | Score | Date |
|---|---|---|---|---|---|
| 0 | 1 | 214966 | Hrishikesh | 166 | 30-07-2020 |
| 1 | 2 | 275485 | Yash | 143 | 31/07/2020 |
| 2 | 3 | 214755 | Harshal | 138 | 28-07-2020 |
| 3 | 4 | 299875 | Rahul | 137 | 30-07-2020 |
| 4 | 5 | 269985 | Ashutosh | 130 | 31/07/2020 |
| 5 | 6 | 2547811 | Aishwarya | 128 | 30-07-2020 |
| 6 | 7 | 2789451 | Deep | 125 | 26-07-2020 |
| 7 | 8 | 258647 | Rohit | 122 | 30-07-2020 |
| 8 | 9 | 214785 | Ruturaj | 117 | 30-07-2020 |
| 9 | 10 | 217582 | Santosh | 112 | 30-07-2020 |
| 10 | 11 | 214874 | shubham | 107 | 27-07-2020 |
| 11 | 12 | 224578 | Suraj | 107 | 28-07-2020 |
| 12 | 13 | 2147556 | Deven | 104 | 30-07-2020 |

**Case 3:** Old player new score is less than previous high score.
So, the previous rank and score will remain unaltered.

Old Player: ID: 216966, Name: Hrishikesh, Rank: 1, Date-30-07-2020

| | Rank | ID | Name | Score | Date |
|---|---|---|---|---|---|
| 0 | 1 | 214966 | Hrishikesh | 166 | 30-07-2020 |
| 1 | 2 | 275485 | Yash | 143 | 31/07/2020 |
| 2 | 3 | 214755 | Harshal | 138 | 28-07-2020 |
| 3 | 4 | 299875 | Rahul | 137 | 30-07-2020 |
| 4 | 5 | 269985 | Ashutosh | 130 | 31/07/2020 |
| 5 | 6 | 2547811 | Aishwarya | 128 | 30-07-2020 |
| 6 | 7 | 2789451 | Deep | 125 | 26-07-2020 |
| 7 | 8 | 258647 | Rohit | 122 | 30-07-2020 |
| 8 | 9 | 214785 | Ruturaj | 117 | 30-07-2020 |
| 9 | 10 | 217582 | Santosh | 112 | 30-07-2020 |
| 10 | 11 | 214874 | shubham | 107 | 27-07-2020 |
| 11 | 12 | 224578 | Suraj | 107 | 28-07-2020 |
| 12 | 13 | 2147556 | Deven | 104 | 30-07-2020 |

Plays again:



Scored: 82 = new score
New score < previous score


So, rank and score will remain unaltered.
After all three iterations. The leader board look like this:

| | Rank | ID | Name | Score | Date |
|---|---|---|---|---|---|
| 0 | 1 | 214966 | Hrishikesh | 166 | 30-07-2020 |
| 1 | 2 | 275485 | Yash | 143 | 31/07/2020 |
| 2 | 3 | 214755 | Harshal | 138 | 28-07-2020 |
| 3 | 4 | 299875 | Rahul | 137 | 30-07-2020 |
| 4 | 5 | 269985 | Ashutosh | 130 | 31/07/2020 |
| 5 | 6 | 2547811 | Aishwarya | 128 | 30-07-2020 |
| 6 | 7 | 2789451 | Deep | 125 | 26-07-2020 |
| 7 | 8 | 258647 | Rohit | 122 | 30-07-2020 |
| 8 | 9 | 214785 | Ruturaj | 117 | 30-07-2020 |
| 9 | 10 | 217582 | Santosh | 112 | 30-07-2020 |
| 10 | 11 | 214874 | shubham | 107 | 27-07-2020 |
| 11 | 12 | 224578 | Suraj | 107 | 28-07-2020 |
| 12 | 13 | 2147556 | Deven | 104 | 30-07-2020 |
| 13 | 14 | 264864 | Snehal | 99 | 30-07-2020 |
| 14 | 15 | 264871 | Sharukh | 98 | 26-07-2020 |
| 15 | 16 | 214917 | Gourav | 96 | 30-07-2020 |
| 16 | 17 | 287954 | Ashok | 94 | 27-07-2020 |
| 17 | 18 | 217588 | Yash | 89 | 26-07-2020 |
| 18 | 19 | 264866 | Neha | 88 | 28-07-2020 |
| 19 | 20 | 264861 | Pratik | 88 | 30-07-2020 |
| 20 | 21 | 264875 | Varun | 88 | 28-07-2020 |
| 21 | 22 | 264876 | Alia | 85 | 30-07-2020 |
| 22 | 23 | 264872 | Amir | 78 | 30-07-2020 |
| 23 | 24 | 264858 | Ragav | 78 | 27-07-2020 |
| 24 | 25 | 264865 | Vedika | 78 | 28-07-2020 |
| 25 | 26 | 264877 | Sushant | 77 | 30-07-2020 |
| 26 | 27 | 264874 | Sara | 75 | 28-07-2020 |
| 27 | 28 | 247852 | Ajinkya | 74 | 30-07-2020 |
| 28 | 29 | 214475 | Shubhangi | 70 | 26-07-2020 |
| 29 | 30 | 245876 | Omkar | 61 | 30-07-2020 |
| 30 | 31 | 205687 | Nishant | 60 | 28-07-2020 |
| 31 | 32 | 264882 | Shraddha | 58 | 30-07-2020 |
| 32 | 33 | 264857 | Rakesh | 56 | 30-07-2020 |
| 33 | 34 | 2148544 | Sudeep | 55 | 30-07-2020 |
| 34 | 35 | 264867 | Swati | 55 | 26-07-2020 |
| 35 | 36 | 214752 | Akshay | 51 | 30-07-2020 |
| 36 | 37 | 264873 | Deepika | 50 | 27-07-2020 |
| 37 | 38 | 264870 | Saif | 49 | 30-07-2020 |
| 38 | 39 | 264869 | Kareena | 48 | 30-07-2020 |
| 39 | 40 | 264868 | Smiral | 46 | 28-07-2020 |
| 40 | 41 | 264859 | Namrata | 45 | 30-07-2020 |
| 41 | 42 | 264863 | Priti | 45 | 30-07-2020 |
| 42 | 43 | 475825 | Prasad | 44 | 30-07-2020 |
| 43 | 44 | 264878 | Prashant | 44 | 30-07-2020 |
| 44 | 45 | 2784551 | Prajwal | 42 | 30-07-2020 |
| 45 | 46 | 245865 | Tushar | 39 | 28-07-2020 |
| 46 | 47 | 264856 | Prasad | 33 | 26-07-2020 |
| 47 | 48 | 224756 | Akash | 33 | 30-07-2020 |
| 48 | 49 | 234578 | Akshay | 29 | 27-07-2020 |
| 49 | 50 | 415485 | Supriya | 27 | 30-07-2020 |
| 50 | 51 | 214759 | Ketan | 26 | 30-07-2020 |
| 51 | 52 | 247862 | Dhruv | 25 | 28-07-2020 |
| 52 | 53 | 264881 | Kushboo | 16 | 26-07-2020 |
| 53 | 54 | 264862 | Swetha | 16 | 30-07-2020 |
| 54 | 55 | 264880 | Dheeraj | 13 | 27-07-2020 |

**Extras:**

New Player: Name: ‘Rushi’, ID: 288865, plays the game:

.csv file before he plays:

Link: https://docs.google.com/spreadsheets/d/1I98-53mJ-AMnae_dKzC7b0m9AGamhyfOp67NUi0XgEc/edit?usp=sharing

| | A | B | C | D | E |
|---|---|---|---|---|---|
| 1 | Rank | ID | Name | Score | Date |
| 2 | 1 | 214966 | Hrishikesh | 166 | 30-07-2020 |
| 3 | 2 | 275485 | Yash | 143 | 31/07/2020 |
| 4 | 3 | 214755 | Harshal | 138 | 28-07-2020 |
| 5 | 4 | 299875 | Rahul | 137 | 30-07-2020 |
| 6 | 5 | 269985 | Ashutosh | 130 | 31/07/2020 |
| 7 | 6 | 2547811 | Aishwarya | 128 | 30-07-2020 |
| 8 | 7 | 2789451 | Deep | 125 | 26-07-2020 |
| 9 | 8 | 258647 | Rohit | 122 | 30-07-2020 |
| 10 | 9 | 214785 | Ruturaj | 117 | 30-07-2020 |
| 11 | 10 | 217582 | Santosh | 112 | 30-07-2020 |
| 12 | 11 | 214874 | shubham | 107 | 27-07-2020 |
| 13 | 12 | 224578 | Suraj | 107 | 28-07-2020 |
| 14 | 13 | 2147556 | Deven | 104 | 30-07-2020 |
| 15 | 14 | 264864 | Snehal | 99 | 30-07-2020 |
| 16 | 15 | 264871 | Sharukh | 98 | 26-07-2020 |
| 17 | 16 | 214917 | Gourav | 96 | 30-07-2020 |
| 18 | 17 | 287954 | Ashok | 94 | 27-07-2020 |
| 19 | 18 | 217588 | Yash | 89 | 26-07-2020 |
| 20 | 19 | 264866 | Neha | 88 | 28-07-2020 |
| 21 | 20 | 264861 | Pratik | 88 | 30-07-2020 |
| 22 | 21 | 264875 | Varun | 88 | 28-07-2020 |
| 23 | 22 | 264876 | Alia | 85 | 30-07-2020 |
| 24 | 23 | 264872 | Amir | 78 | 30-07-2020 |
| 25 | 24 | 264858 | Ragav | 78 | 27-07-2020 |
| 26 | 25 | 264865 | Vedika | 78 | 28-07-2020 |
| 27 | 26 | 264877 | Sushant | 77 | 30-07-2020 |
| 28 | 27 | 264874 | Sara | 75 | 28-07-2020 |

| | A | B | C | D | E |
|---|---|---|---|---|---|
| 29 | 28 | 247852 | Ajinkya | 74 | 30-07-2020 |
| 30 | 29 | 214475 | Shubhangi | 70 | 26-07-2020 |
| 31 | 30 | 245876 | Omkar | 61 | 30-07-2020 |
| 32 | 31 | 205687 | Nishant | 60 | 28-07-2020 |
| 33 | 32 | 264882 | Shraddha | 58 | 30-07-2020 |
| 34 | 33 | 264857 | Rakesh | 56 | 30-07-2020 |
| 35 | 34 | 2148544 | Sudeep | 55 | 30-07-2020 |
| 36 | 35 | 264867 | Swati | 55 | 26-07-2020 |
| 37 | 36 | 214752 | Akshay | 51 | 30-07-2020 |
| 38 | 37 | 264873 | Deepika | 50 | 27-07-2020 |
| 39 | 38 | 264870 | Saif | 49 | 30-07-2020 |
| 40 | 39 | 264869 | Kareena | 48 | 30-07-2020 |
| 41 | 40 | 264868 | Smiral | 46 | 28-07-2020 |
| 42 | 41 | 264859 | Namrata | 45 | 30-07-2020 |
| 43 | 42 | 264863 | Priti | 45 | 30-07-2020 |
| 44 | 43 | 475825 | Prasad | 44 | 30-07-2020 |
| 45 | 44 | 264878 | Prashant | 44 | 30-07-2020 |
| 46 | 45 | 2784551 | Prajwal | 42 | 30-07-2020 |
| 47 | 46 | 245865 | Tushar | 39 | 28-07-2020 |
| 48 | 47 | 264856 | Prasad | 33 | 26-07-2020 |
| 49 | 48 | 224756 | Akash | 33 | 30-07-2020 |
| 50 | 49 | 234578 | Akshay | 29 | 27-07-2020 |
| 51 | 50 | 415485 | Supriya | 27 | 30-07-2020 |
| 52 | 51 | 214759 | Ketan | 26 | 30-07-2020 |
| 53 | 52 | 247862 | Dhruv | 25 | 28-07-2020 |
| 54 | 53 | 264881 | Kushboo | 16 | 26-07-2020 |
| 55 | 54 | 264862 | Swetha | 16 | 30-07-2020 |
| 56 | 55 | 264880 | Dheeraj | 13 | 27-07-2020 |

| | Rank | ID | Name | Score | Date |
|---|---|---|---|---|---|
| 0 | 1 | 214966 | Hrishikesh | 166 | 30-07-2020 |
| 1 | 2 | 275485 | Yash | 143 | 31/07/2020 |
| 2 | 3 | 214755 | Harshal | 138 | 28-07-2020 |
| 3 | 4 | 299875 | Rahul | 137 | 30-07-2020 |
| 4 | 5 | 269985 | Ashutosh | 130 | 31/07/2020 |
| 5 | 6 | 2547811 | Aishwarya | 128 | 30-07-2020 |
| 6 | 7 | 2789451 | Deep | 125 | 26-07-2020 |
| 7 | 8 | 258647 | Rohit | 122 | 30-07-2020 |
| 8 | 9 | 214785 | Ruturaj | 117 | 30-07-2020 |
| 9 | 10 | 217582 | Santosh | 112 | 30-07-2020 |
| 10 | 11 | 214874 | shubham | 107 | 27-07-2020 |
| 11 | 12 | 224578 | Suraj | 107 | 28-07-2020 |
| 12 | 13 | 2147556 | Deven | 104 | 30-07-2020 |
| 13 | 14 | 264864 | Snehal | 99 | 30-07-2020 |
| 14 | 15 | 264871 | Sharukh | 98 | 26-07-2020 |
| 15 | 16 | 214917 | Gourav | 96 | 30-07-2020 |
| 16 | 17 | 287954 | Ashok | 94 | 27-07-2020 |
| 17 | 18 | 217588 | Yash | 89 | 26-07-2020 |
| 18 | 19 | 264866 | Neha | 88 | 28-07-2020 |
| 19 | 20 | 264861 | Pratik | 88 | 30-07-2020 |
| 20 | 21 | 264875 | Varun | 88 | 28-07-2020 |
| 21 | 22 | 264876 | Alia | 85 | 30-07-2020 |
| 22 | 23 | 264872 | Amir | 78 | 30-07-2020 |
| 23 | 24 | 264858 | Ragav | 78 | 27-07-2020 |
| 24 | 25 | 264865 | Vedika | 78 | 28-07-2020 |
| 25 | 26 | 264877 | Sushant | 77 | 30-07-2020 |
| 26 | 27 | 264874 | Sara | 75 | 28-07-2020 |

| | | | | | |
|---|---|---|---|---|---|
| 27 | 28 | 247852 | Ajinkya | 74 | 30-07-2020 |
| 28 | 29 | 214475 | Shubhangi | 70 | 26-07-2020 |
| 29 | 30 | 245876 | Omkar | 61 | 30-07-2020 |
| 30 | 31 | 205687 | Nishant | 60 | 28-07-2020 |
| 31 | 32 | 264882 | Shraddha | 58 | 30-07-2020 |
| 32 | 33 | 264857 | Rakesh | 56 | 30-07-2020 |
| 33 | 34 | 2148544 | Sudeep | 55 | 30-07-2020 |
| 34 | 35 | 264867 | Swati | 55 | 26-07-2020 |
| 35 | 36 | 214752 | Akshay | 51 | 30-07-2020 |
| 36 | 37 | 264873 | Deepika | 50 | 27-07-2020 |
| 37 | 38 | 264870 | Saif | 49 | 30-07-2020 |
| 38 | 39 | 264869 | Kareena | 48 | 30-07-2020 |
| 39 | 40 | 264868 | Smiral | 46 | 28-07-2020 |
| 40 | 41 | 264859 | Namrata | 45 | 30-07-2020 |
| 41 | 42 | 264863 | Priti | 45 | 30-07-2020 |
| 42 | 43 | 475825 | Prasad | 44 | 30-07-2020 |
| 43 | 44 | 264878 | Prashant | 44 | 30-07-2020 |
| 44 | 45 | 2784551 | Prajwal | 42 | 30-07-2020 |
| 45 | 46 | 245865 | Tushar | 39 | 28-07-2020 |
| 46 | 47 | 264856 | Prasad | 33 | 26-07-2020 |
| 47 | 48 | 224756 | Akash | 33 | 30-07-2020 |
| 48 | 49 | 234578 | Akshay | 29 | 27-07-2020 |
| 49 | 50 | 415485 | Supriya | 27 | 30-07-2020 |
| 50 | 51 | 214759 | Ketan | 26 | 30-07-2020 |
| 51 | 52 | 247862 | Dhruv | 25 | 28-07-2020 |
| 52 | 53 | 264881 | Kushboo | 16 | 26-07-2020 |
| 53 | 54 | 264862 | Swetha | 16 | 30-07-2020 |
| 54 | 55 | 264880 | Dheeraj | 13 | 27-07-2020 |

He Scores:115, Rank: 10


| | Rank | ID | Name | Score | Date |
|---|---|---|---|---|---|
| 0 | 1 | 214966 | Hrishikesh | 166 | 30-07-2020 |
| 1 | 2 | 275485 | Yash | 143 | 31/07/2020 |
| 2 | 3 | 214755 | Harshal | 138 | 28-07-2020 |
| 3 | 4 | 299875 | Rahul | 137 | 30-07-2020 |
| 4 | 5 | 269985 | Ashutosh | 130 | 31/07/2020 |
| 5 | 6 | 2547811 | Aishwarya | 128 | 30-07-2020 |
| 6 | 7 | 2789451 | Deep | 125 | 26-07-2020 |
| 7 | 8 | 258647 | Rohit | 122 | 30-07-2020 |
| 8 | 9 | 214785 | Ruturaj | 117 | 30-07-2020 |
| 9 | 10 | 288865 | Rushi | 115 | 31/07/2020 |
| 10 | 11 | 217582 | Santosh | 112 | 30-07-2020 |
| 11 | 12 | 224578 | Suraj | 107 | 28-07-2020 |
| 12 | 13 | 214874 | shubham | 107 | 27-07-2020 |
| 13 | 14 | 2147556 | Deven | 104 | 30-07-2020 |
| 14 | 15 | 264864 | Snehal | 99 | 30-07-2020 |
| 15 | 16 | 264871 | Sharukh | 98 | 26-07-2020 |
| 16 | 17 | 214917 | Gourav | 96 | 30-07-2020 |
| 17 | 18 | 287954 | Ashok | 94 | 27-07-2020 |
| 18 | 19 | 217588 | Yash | 89 | 26-07-2020 |
| 19 | 20 | 264866 | Neha | 88 | 28-07-2020 |
| 20 | 21 | 264875 | Varun | 88 | 28-07-2020 |
| 21 | 22 | 264861 | Pratik | 88 | 30-07-2020 |
| 22 | 23 | 264876 | Alia | 85 | 30-07-2020 |
| 23 | 24 | 264872 | Amir | 78 | 30-07-2020 |
| 24 | 25 | 264858 | Ragav | 78 | 27-07-2020 |
| 25 | 26 | 264865 | Vedika | 78 | 28-07-2020 |
| 26 | 27 | 264877 | Sushant | 77 | 30-07-2020 |
| 27 | 28 | 264874 | Sara | 75 | 28-07-2020 |
| 28 | 29 | 247852 | Ajinkya | 74 | 30-07-2020 |
| 29 | 30 | 214475 | Shubhangi | 70 | 26-07-2020 |
| 30 | 31 | 245876 | Omkar | 61 | 30-07-2020 |
| 31 | 32 | 205687 | Nishant | 60 | 28-07-2020 |
| 32 | 33 | 264882 | Shraddha | 58 | 30-07-2020 |
| 33 | 34 | 264857 | Rakesh | 56 | 30-07-2020 |
| 34 | 35 | 2148544 | Sudeep | 55 | 30-07-2020 |
| 35 | 36 | 264867 | Swati | 55 | 26-07-2020 |
| 36 | 37 | 214752 | Akshay | 51 | 30-07-2020 |

Updated .csv file:
https://docs.google.com/spreadsheets/d/1_RIF7wIbghXnv2rPlrGTxmFDDnlcKhxDw1fWSgx0P8Y/edit?usp=sharing

| | A | B | C | D | E |
|---|---|---|---|---|---|
| 1 | Rank | ID | Name | Score | Date |
| 2 | 1 | 214966 | Hrishikesh | 166 | 30-07-2020 |
| 3 | 2 | 275485 | Yash | 143 | 31/07/2020 |
| 4 | 3 | 214755 | Harshal | 138 | 28-07-2020 |
| 5 | 4 | 299875 | Rahul | 137 | 30-07-2020 |
| 6 | 5 | 269985 | Ashutosh | 130 | 31/07/2020 |
| 7 | 6 | 2547811 | Aishwarya | 128 | 30-07-2020 |
| 8 | 7 | 2789451 | Deep | 125 | 26-07-2020 |
| 9 | 8 | 258647 | Rohit | 122 | 30-07-2020 |
| 10 | 9 | 214785 | Ruturaj | 117 | 30-07-2020 |
| 11 | 10 | 288865 | Rushi | 115 | 31/07/2020 |
| 12 | 11 | 217582 | Santosh | 112 | 30-07-2020 |
| 13 | 12 | 224578 | Suraj | 107 | 28-07-2020 |
| 14 | 13 | 214874 | shubham | 107 | 27-07-2020 |
| 15 | 14 | 2147556 | Deven | 104 | 30-07-2020 |
| 16 | 15 | 264864 | Snehal | 99 | 30-07-2020 |
| 17 | 16 | 264871 | Sharukh | 98 | 26-07-2020 |
| 18 | 17 | 214917 | Gourav | 96 | 30-07-2020 |
| 19 | 18 | 287954 | Ashok | 94 | 27-07-2020 |
| 20 | 19 | 217588 | Yash | 89 | 26-07-2020 |
| 21 | 20 | 264866 | Neha | 88 | 28-07-2020 |
| 22 | 21 | 264875 | Varun | 88 | 28-07-2020 |
| 23 | 22 | 264861 | Pratik | 88 | 30-07-2020 |
| 24 | 23 | 264876 | Alia | 85 | 30-07-2020 |
| 25 | 24 | 264872 | Amir | 78 | 30-07-2020 |
| 26 | 25 | 264858 | Ragav | 78 | 27-07-2020 |
| 27 | 26 | 264865 | Vedika | 78 | 28-07-2020 |
| 28 | 27 | 264877 | Sushant | 77 | 30-07-2020 |
| 29 | 28 | 264874 | Sara | 75 | 28-07-2020 |

| | A | B | C | D | E |
|---|---|---|---|---|---|
| 29 | 28 | 264874 | Sara | 75 | 28-07-2020 |
| 30 | 29 | 247852 | Ajinkya | 74 | 30-07-2020 |
| 31 | 30 | 214475 | Shubhangi | 70 | 26-07-2020 |
| 32 | 31 | 245876 | Omkar | 61 | 30-07-2020 |
| 33 | 32 | 205687 | Nishant | 60 | 28-07-2020 |
| 34 | 33 | 264882 | Shraddha | 58 | 30-07-2020 |
| 35 | 34 | 264857 | Rakesh | 56 | 30-07-2020 |
| 36 | 35 | 2148544 | Sudeep | 55 | 30-07-2020 |
| 37 | 36 | 264867 | Swati | 55 | 26-07-2020 |
| 38 | 37 | 214752 | Akshay | 51 | 30-07-2020 |
| 39 | 38 | 264873 | Deepika | 50 | 27-07-2020 |
| 40 | 39 | 264870 | Saif | 49 | 30-07-2020 |
| 41 | 40 | 264869 | Kareena | 48 | 30-07-2020 |
| 42 | 41 | 264868 | Smiral | 46 | 28-07-2020 |
| 43 | 42 | 264859 | Namrata | 45 | 30-07-2020 |
| 44 | 43 | 264863 | Priti | 45 | 30-07-2020 |
| 45 | 44 | 264878 | Prashant | 44 | 30-07-2020 |
| 46 | 45 | 475825 | Prasad | 44 | 30-07-2020 |
| 47 | 46 | 2784551 | Prajwal | 42 | 30-07-2020 |
| 48 | 47 | 245865 | Tushar | 39 | 28-07-2020 |
| 49 | 48 | 264856 | Prasad | 33 | 26-07-2020 |
| 50 | 49 | 224756 | Akash | 33 | 30-07-2020 |
| 51 | 50 | 234578 | Akshay | 29 | 27-07-2020 |
| 52 | 51 | 415485 | Supriya | 27 | 30-07-2020 |
| 53 | 52 | 214759 | Ketan | 26 | 30-07-2020 |
| 54 | 53 | 247862 | Dhruv | 25 | 28-07-2020 |
| 55 | 54 | 264881 | Kushboo | 16 | 26-07-2020 |
| 56 | 55 | 264862 | Swetha | 16 | 30-07-2020 |
| 57 | 56 | 264880 | Dheeraj | 13 | 27-07-2020 |

**Complete Source code of the game available on the following link:**

https://github.com/hrishikesh495/Balloon-Hunt.git

**Open using Spider IDE > Open Project**