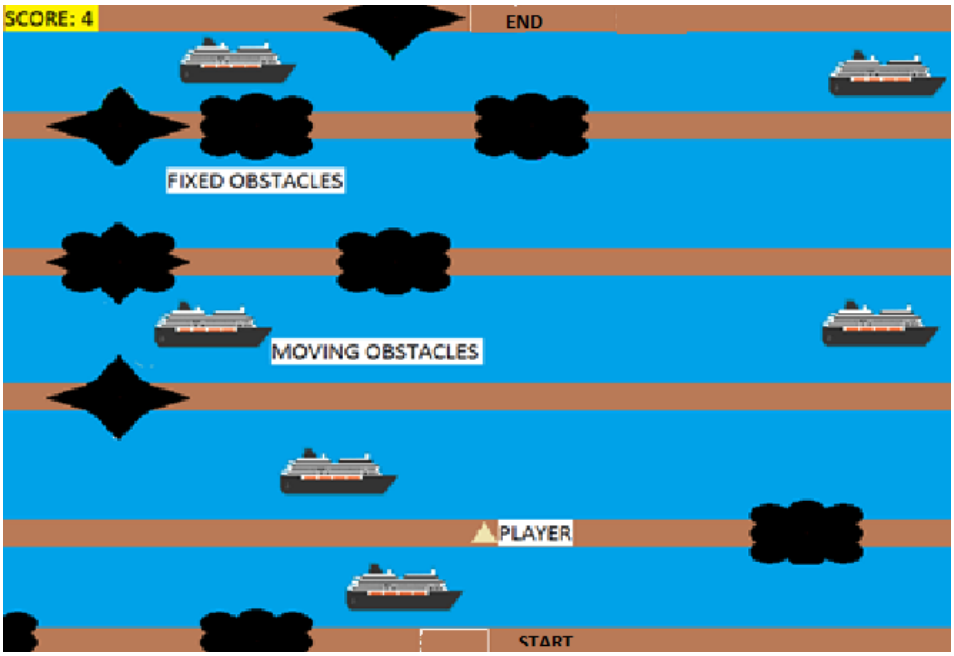
ISS Assignment 3
(River Crossing Competition Game)
Deadline – Feb 18th 8 pm (no deadline extension)

Objective

Strengthen your Python Programming Skills



Functional Requirements

Playing arena consists of a river with some partitions in it. There are 2 players in the game, one at Top and another at Bottom (2 sides of the river bank). A player is safe when it is standing on a partition/slab. There are two kinds of obstacles, moving and fixed. The player starts from the 'START' partition and must reach the 'END' position for player 1 and the 'END' becomes 'START', 'START' becomes 'END' for Player 2. The moving obstacles move from left to right. The player can move up, down, left and right. Player dies once he/she touches any obstacle. As player crosses moving obstacle successfully, accrues 10 points and for crossing fixed obstacles 5 points. Only one player is playing at a given point of time. Your aim is to make players reach the other end of the river. The player wins the game based on

a) Time taken to cross
b) Points accrued while crossing obstacles

At the end of the game (after both the players either die or reach other 'END'), the players are respawned to their starting position. If the player wins a round, the speed of moving objects increases in the next round for that player.

Show your creativity along with these requirements and the requirements mentioned in the previous paragraphs:

- Score must be shown on the screen and gets updated based on stated requirements and design choices.
- If there are any further assumptions or design choices, please document it.
- A minimum of two kinds of obstacles are present (fixed and moving), you could add other obstacles (such as crocodiles, sharks, etc) with a configuration file to manage their rate of movement.
- Player movements must be up, down, left and right. Each of the 2 players should have their own keys for the movement
- At least 5 partitions must be there in the river.
- Collision detection - Between players and obstacles.

Technology Requirements

a) Game should be developed in Python only. You may use Python libraries for your development including **pygame**.
b) Code as per PEP8 standards.
c) Color, Fonts, Messages on 'Success' or 'hit with obstacle' should be in config file.

All your functional and technical questions should be sent by Feb 12th 2020 by 8 pm, any question after deadline will not be entertained. However, you may continue to show your demonstrations / progress to TAs/Instructors for improvisation.

Assessment Criteria

a) Assignment will be evaluated for 100 points
b) Meeting Functional (60) and Technical (20) Requirements. Follow PEP8 coding standards, **negative marking** upto 10 points for not following standards.
c) Creativity – 20 points
d) Overall zero if plagiarism is detected

Submission Format

a) Deadline for submission is Feb 18th 8 pm. No extension to deadline
b) Submission would be on your Gitlab account, code modified after submission will get you **0** marks
c) Submit your Gitlab repo name in Moodle for the evaluation