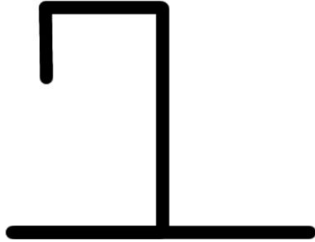# Module 1 – Project 1

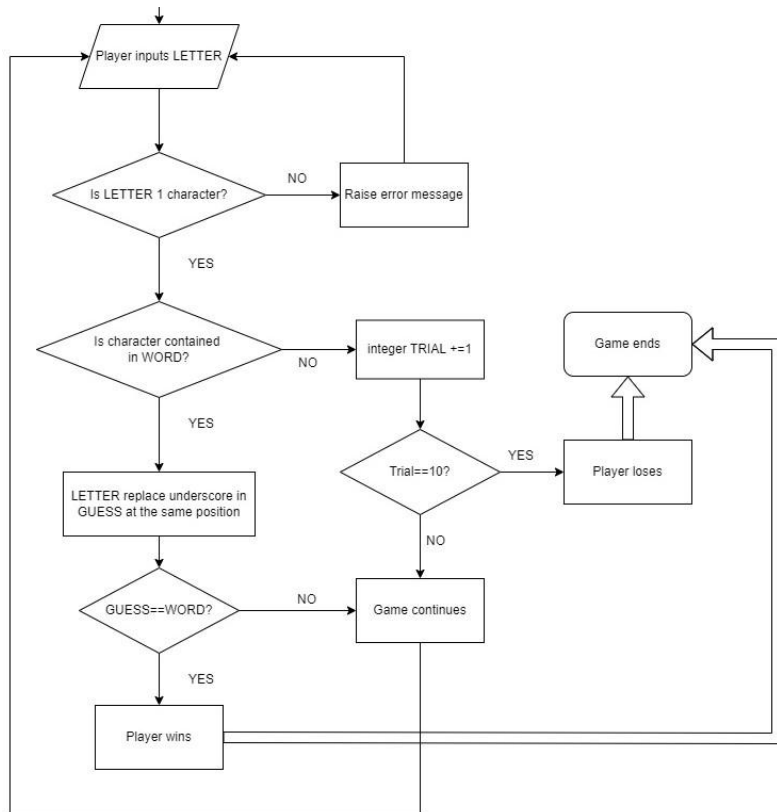## The hangman game

Daniel Smadja

Victoire Rey

Description of the game

- Two players :
    - *The Host*, thinking of a word
    - *The Player*, guessing the word
- The Player has to figure out which is the **secret word** before the man gets hanged.
- With each error, the man will be closer to death! We defined the number of incorrect guesses to 10.

Process

Initialization of the project

- Creating repo & Readme on GitHub
- Look up the rules to understand the mechanisms

Pre-coding phase

- Step-by-step approach to discuss the algorithm
- Detailed flowchart to save time for the coding phase

Development phase

- First draft of code
- Test & raise issues
- Resolve bugs

Defining the main function

Role of the function: as the player guesses more letters, update the guess variable

```python
def player_guess_letter(x,y,z):
    import re
    #x=letter, or user_input
    #y=word to guess, never changes
    #z=the guess, to be updated by the function
    matches=re.finditer(x,y)
    matches_position=[match.start() for match in matches]

    for i in matches_position:
        z = z[:i] + x + z[i+1:]
    return z
```

Example:

word to guess: "concert"
guess: "-------"
user input: "c"

player_guess_letter("c", "concert", "-------")

guess="c--c-"

1st: randomly pick up the HOST and the PLAYER

```python
import random

players=[]
player1=input("Player One, please input your name: ")
player2=input('Player Two, please input your name: ')
players.append(player1)
players.append(player2)

host=random.choice(players)

if host==player1:
    print(player1,"is the HOST ",player2,"is the PLAYER")

else:
    print(player2,"is the HOST ",player1,"is the PLAYER")
```

2nd: define the 3 main variables (word, letter, guess)

```python
word=input(f'{host}, you are the HOST! Please input the word you want the player to find! ')
guess='-'*len(word)
print(f'You have to guess {guess}, a {len(word)}-letter word')
trials=0
letter=input(f'Please input your guess: ')
guess=player_guess_letter(letter,word,guess)
```

3rd: a WHILE loop which repeats until guess==word

```python
while guess!=word:
    if trials==9:
        print('You are to be hanged, burn in hell!')
        break
    elif len(letter)>1:
        print('Your input must be 1 single letter at a time!')
        letter=input(f'{guess}. Please input your next guess. You have {10-trials} trials left! ')
    else:
        if letter not in [i for i in word]:
            trials+=1
            letter=input(f'{guess}. Please input your next guess. You have {10-trials} trials left! ')
        else:
            guess=player_guess_letter(letter,word,guess)
            if guess==word:
                print(f'Congratulations! You win! You had to guess {word}')
                break
            else:
                letter=input(f'{guess}. Please input your next guess.You have {10-trials} trials left! ')
```

```
else:
    print(player2,"is the HOST ",player1,"is the PLAYER")

word=input(f'{host}, you are the HOST! Please input the word you want the player to find! ')
word=word.lower()
guess='-'*len(word)
print(f'You have to guess {guess}, a {len(word)}-letter word')
trials=0
letter=input(f'Please input your guess: ')
guess=player_guess_letter(letter,word,guess)

while guess!=word:
    if trials==9:
        print('You are to be hanged, burn in hell!')
        break
    elif len(letter)>1:
        print('Your input must be 1 single letter at a time!')
        letter=input(f'{guess}. Please input your next guess. You have {10-trials} trials left! ')
    else:
        if letter not in [i for i in word]:
            trials+=1
            letter=input(f'{guess}. Please input your next guess. You have {10-trials} trials left! ')
        else:
            guess=player_guess_letter(letter,word,guess)
            if guess==word:
                print(f'Congratulations! You win! You had to guess {word}')
                break
            else:
                letter=input(f'{guess}. Please input your next guess.You have {10-trials} trials left! ')

Player One, please input your name:
```

Entrée [ ]:

Thank you!