Pre-sessional course Programming day2

wasit7@gmail.com

Programming

Input data

Output Information

Data type

- Integer: -1, 0, 1 and 2
- Floating point number: -1.0, 0.0, 1.0e3
- String: ‘hello’, “world”
- Object!

Integer operator

- Addition:
  - 7 + 2 is 9
- Subtraction:
  - 7 – 2 is 5
- Integer division:
  - 7/2 is 3
- Modulo (find the remainder)
  - 7%2 is 1

Floating point operation

- Addition:
  - 7.0 + 2.0 is 9.0
- Subtraction:
  - 7.1 – 2.0 is 5.1
- Integer division:
  - 7.0/2.0 is 3.5
- Modulo (find the remainder)
  - 3.14159%2 is 1.14149

String operation

- Addition:
  - “Hello”+” world” is “Hello world”
- Multiplication
  - “Hello”*3 is ”HelloHelloHello”

List

- A = []
  - A is an empty list
- A = [‘X’]
  - Insert ‘X’ into the list
- A.append(‘Y’)
  - Adding y to the list a at the last position
  - A is [‘X’,’Y’]
- B = A.pop()
  - Get the last element for the list A
  - A is [‘X’]
  - B is [‘Y’]

Variable

- To store a value 1 into the variable x
  - x=1
- To update the value of x
  - x=x+1

Repeat process by “for” and “while”

- To repeat process for 3 times

```
for x in range(3):
    [do something]
```

- To repeat process until x is larger than 3

```
While 3 < x:
    [do something]
```

Game0: add numbers

- Get 2 input number, X and Y
- Find the addition between X and Y
- Print the result on the screen

Game1: guess a number

- Computer random a integer and user have to guess the correct number
- The number is in arrange between 0 to 64
- If the guess number is less than the correct number, print “LESS”
- If the guess number is larger than the correct number, print “LARGER”
- Computer get input from console until user make a correct guess

Game2: cards

- A deck of cards consist of 6 cards, 'A', 'B', 'C', 'D', 'E‘ and 'F‘ (A is less than F)
- The cards are shuffled and given to a computer and a human player equally
- For each turn until no card left
  - Computer and player choose a card from their hand
  - The less card win the turn and get a score
- The higher score player win the game