# Homework 2

1. **Comparison operators**

Complete the table below:

|  |  |
| --- | --- |
| Operator | Name |
| == |  |
| != |  |
|  | Less than |
|  | Greater than |
| <= |  |
|  | Greater than or equal to |

 [3]

1. **Selection statements**

Complete the following selection statements by filling in the blanks:

\_\_\_\_ score \_\_\_\_ 1337:
 print(“1337 is the maximum score – have 5 extra lives!”)
 lives = lives + 5
\_\_\_\_ score \_\_\_\_ 1000:
 print(“Scoring 1000 or more grants you 3 extra lives!”)
 lives = lives + 3
\_\_\_\_ score \_\_\_\_ 500:
 print(“That score is terrible. Have an extra life and try again.”)
 lives = lives + 1
\_\_\_\_:
 print(“A pitiful attempt! Lose a life!”)
 lives = lives - 1
 [5]

1. **Choosing Loops**

Explain how you would choose whether to use a FOR loop or a WHILE loop. [4]

FOR: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

WHILE: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. **For Loops**

Describe the outputs of the following programs

|  |  |
| --- | --- |
| Program | Output |
| for count in range(3): print(“CS FTW!”) |  |
| for count in range(2): print(count)print(“Finished!”) |  |
| for count in range(3): print(“This is step”, count+1) |  |
| for count in range(3): print((count+1)\*3) |  |

[4]

1. **While Loops**

Complete the table to explain the purpose of each of these while loops.

|  |  |
| --- | --- |
| Program | Explanation |
| lives = 5while lives > 0:# Play game, set loseALife to True or False if loseALife == True: lives = lives – 1print(“Game Over!”) |  |
| realPpassword = “P@ssw0rd”password = input(“Enter your password: ”)while password != realPassword: print(“Password incorrect”) password = input(“Enter your password: ”) |  |
| again = “y”while again == “y”: # Perform some action again = input(“Go again? y/n: ”) |  |
| bill = 0budget = 100while \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: price = float(input(“Price of item: ”)) bill = bill + priceprint(“Sorry, just over budget!”) | Loop repeats until the user goes over the budget amount |

 [4]

 [Total 20 marks]