# 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 = 5 while lives > 0: # Play game, set loseALife to True or False  if loseALife == True:  lives = lives – 1 print(“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 = 0 budget = 100  while \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:  price = float(input(“Price of item: ”))  bill = bill + price print(“Sorry, just over budget!”) | Loop repeats until the user  goes over the budget amount |

[4]

[Total 20 marks]