Name:

Year 10 Interleaved Homework 5

This task is not about how much you can remember, it may require you to use the course

Use this QR code to visit the course website.

website to help you answer some questions.

1. Complete the following tables showing different values in Binary, Hexadecimal and Decimal

Decimal	Binary	Hexadecimal
57	00111001	39
241	11110001	F1
194	11000010	C2

2. Apply a left shift of 3 places. Give your answer in 8 bits

1	1	0	0	0	1	1	0
0	0	1	1	0	0	0	0

3. What is the arithmetic value of this shift?
   * by 8

4. Complete the table to show the output of an OR gate

A	B	Output
0	0	0
0	1	1
1	0	1
1	1	1

5. What is the word represented in this Extended ASCII binary

   01001111, 01110110, 01100101, 01110010, 01100110, 01101100, 01101111, 01110111

   Overflow

6. Calculate the file size, in Bytes, for the word represented in this Extended ASCII binary in question 5

   8
   (in EASCII number of words = bytes)

7. Covert the word "Data" in to 8Bit Extended ascii, use one line for each letter
   01000100
   01100001
   01110100
   01100001

8. State what is meant by the term Decomposition
   Breaking down a complex task

9. Define the term Abstraction.
   Removal of unnecessary data

10. Give an example of an input device.
    Mouse

11. Give an example of an output device.

    Monitor

12. State the difference between open-source software and proprietary software.
    Open-source software is publicly available for free and for public edit while proprietary software is usually paid and very limited people have access to the source code

13. Write a Python program that calculates the total cost of a hotel reservation based on the number of nights stayed and the type of room.

The program should:

- Get the user to input the number of nights stayed.
- Get the user to input the type of room (e.g., Standard, Deluxe, Suite).
- This should loop continuously until they enter a valid type of room.

Output the total reservation cost:

o Standard: £80.00 per night o
Deluxe: £120.00 per night o
Suite: £200.00 per night

You should use indentation as appropriate, meaningful variable name(s), and Python syntax in your answer.

```
roomType = input("Enter room type (Standard, Deluxe, Suite): ")
```
```
if roomType == "Standard":
```
```
elif roomType == "Deluxe":
```
```
nights = int(input("Enter number of nights stayed: "))
```
```
price = nights * 200
```
```
price = nights * 80
```
```
else:
```
```
while roomType not in ["Standard","Deluxe","Suite"]:
```
```
print(price)
```
```
price = nights * 120
```
```
roomType = input("Enter room type (Standard, Deluxe, Suite): ")
```

roomType = ""

```
nights = 0
roomPrices = {
    "standard": 80,
    "deluxe": 120,
    "suite": 200
}
while roomType.lower() not in ["standard", "deluxe", "suite"]:
    roomType = input("Enter room type ")

while type(nights) != int or nights < 1:
    nights = input("Enter number of nights ")
    try:
        nights = int(nights)
    except:
        continue

print(roomPrices[roomType] * nights)
```