



Problem 1

Using variables (more than 1 variable) , write code that prints out the below sentence:

“Hello there, welcome to Hotel California”

Problem 2

If a car is worth 20,000\$, print out its price after a 24% discount

Problem 3

Use variables to calculate the below equation and print out the output:

$$\frac{25 - (2 \times 23 + 2)}{\frac{3}{4}}$$

Problem 4

Define a variable storing the current temperature of the city you live in and have an if statement that checks whether that temperature is more than 60 F. Print the word “more” if the temperature is above 60 and less if its equal to 60 or less.

Problem 5

Same as problem 4, but add the conditional should do the follwoing:

Print hot if temperature is more than 70

Print warm if it's between 50 and 70

Print cold if its less than 50

Problem 6

Please explain the output of the code chunk below and type out the logic/reasoning behind it. You can run it by yourselves to better dissect it (you can select the code below this is not an image)

```
hero = "knight"
villain = "dragon"
hero_health = 100
dragon_health = 0
treasure_found = True

if hero == "knight":

    if dragon_health <= 0:
        print(treasure_found == True)
    else:
        print("The dragon breathes fire!")

else:
    print("An imposter has entered the castle!")
```

Problem 7

Please explain the output of the code chunk below and type out the logic/reasoning behind it. You can run it by yourselves to better dissect it (you can select the code below this is not an image)

```
hero = "wizard"
monster = "ogre"
hero_health = 30
monster_health = 50
spell_damage = 35

if hero == "wizard":

    monster_health = monster_health - spell_damage

    if monster_health <= 0:
        print(hero_health * 2 == 60)
    else:
        print("The ogre roars with", monster_health, "health left!")

else:
    print("A mysterious figure appears...")
```

Problem 8

Please explain the output of the code chunk below and type out the logic/reasoning behind it. You can run it by yourselves to better dissect it (you can select the code below this is not an image)

```
hero = "Iron Man"
villain = "Thanos"
hero_energy = 40
villain_health = 80
laser_damage = 50

if hero == "Iron Man":

    if villain == "Thanos":

        villain_health = villain_health - laser_damage

        if villain_health <= 0:
            print(hero_energy + 60 == 100)
        else:
            print("Thanos still stands with", villain_health, "health
left!")

    else:
        print("No threat detected.")

else:
    print("Avengers, assemble someone else!")
```