Digital Assignment 1

Python Programming

Name: Rajat Singh

Reg No: 22MCA0139

Question1:

```python
n = 20
a = int(n/2)
b = 2
i = 1
s = ""

for j in range(20):
    s = s + "*"

print(s)

while i<=4:
    s = ""
    for j in range(a-int(b/2)):
        s = s + "*"

    for j in range(b):
        s = s + " "

    for j in range(a-int(b/2)):
        s = s + "*"

    print(s)
    b = b+2
    i = i+1

s = ""
for j in range(20):
    s = s + "*"

print(s)
```

Question 2:

```python
n = int(input("Enter the number : "))
for i in range(n):
    s = ""
    for j in range(10):
        s+="("

    if i==0:
        s+=" "
    else:
        s+=f"{i}"

    for j in range(10):
        s+=")"
    print(s)
```

Question 3:

```python
basic = int(input("Give input: "))
mid = basic + (basic * (10/100))
salary = mid + (basic * (5/100))

print(f"Final salary: {salary}")
```

Question 4:

```python
n=int(input("Enter the number of items purchased : "))
name=[]
quantity=[]
pricePerUnit=[]
total=[]

for i in range(n) :
    name.append(input("Enter the name of the item purchased : "))
    quantity.append(int(input("Enter the quantity of items purchased : ")))
    pricePerUnit.append(int(input("Enter price Per Unit : ")))
    total.append((quantity[i]*pricePerUnit[i]))

print("-----------------Invoice-----------------")
print("Name     ",end="")
print("Quantity    ",end="")
print("Price per unit    ",end="")
print("Total      ")

for i in range(n):
    print(name[i],end="        ")
    print(quantity[i],end="         ")
    print(pricePerUnit[i],end="           ")
    print(total[i])

print("Total amount to be paid is : ", sum(total))
```

Question 5:

```python
while True:
    user_input = input("Enter a value: ")
    if user_input == "q":
        break
    if user_input.isdigit():
        print(f"Data Type of '{user_input}' is int")
    elif user_input.replace(".", "", 1).isdigit():
        print(f"Data Type of '{user_input}' is float")
    elif user_input.lower() == "true" or user_input.lower() == "false":
        print(f"Data Type of '{user_input}' is bool")
    else:
        print(f"Data Type of '{user_input}' is str")
```

Question 6:

```python
print("Enter your details for Generatimg Gravitas Pass")

name = input("Enter your name :  ")

currAff= input("Enter your course : ")

regNo = int(input("Enter your RegNo : "))

phonNo = int(input("Enter your Phone No :"))

print("**********************Gravitass Entry Pass**********************")
print("Event : Ted talk")
print("Date  : 22/5/2023")
print("time  : 9:00 a.m.")
print("Name of Student : ",name)
print("Course          : ",currAff)
print("Register NO      : ",regNo)
print("Phone number     : ",phonNo)
print("*****************************************************************
")
```

Question 7:

```python
def giveAverage(data, name):
    marks = data[name]
    avg = (sum(marks))/len(marks)

    return avg

n = int(input("Enter the number of students: "))

i=1
data = {}
while i<=n:
    name = input(f"Enter name of student number {i}: ")
    marks = []
    sub_num = int(input(f"Enter the number of subjects for {name}: "))
    j = 1
    while j<=sub_num:
        temp = int(input(f"Enter marks of {name} for subject {j}: "))
        marks.append(temp)
        j+=1
```

```python
        data[name] = marks
        i+=1

query = input("Which students average do you want to see: ")
if query in data:
    avg = giveAverage(data, query)
    print(f"Average marks for {query} is {avg:0,.2f}.")
else:
    print("The name you entered does not exist in the data. Try again!")
```

Question 8:

```python
print("Answer the questions to check insurance eligibility :")
print("just type 'y' for yes ans 'n' for no  , 'm' for male and 'f' for female
and age in years :")

mryStatus = input("Are you married ? : ")
gen=input("What is your gender ? : ")
age = int(input("What is your age ? : "))

if(mryStatus=='y'):
    if(gen=='m' and age > 30):
        print("You are eligibel!!")
    elif(gen=='f' and age > 25):
        print("You are eligibel!!")
    else:
        print("you are not eligible!!")
else:
    print("you are not eligible!!")
```