Application Programming Lab

Assignment - 3

Name – Prashant Kumar Singh | Roll Number - 12111019

Question - 1

```python
lower_value = int(input ("Please, Enter the Lowest Range Value: "))
upper_value = int(input ("Please, Enter the Upper Range Value: "))

print ("The Prime Numbers in the range are: ")
for number in range (lower_value, upper_value + 1):
    if number > 1:
        for i in range (2, number):
            if (number % i) == 0:
                break
        else:
            print (number)
```

```
Please, Enter the Lowest Range Value: 4
Please, Enter the Upper Range Value: 19
The Prime Numbers in the range are:
5
7
11
13
17
19
```

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Question – 2.1

```python
rows = int(input("Number Of Rows\n"))
k = 2 * rows - 2
for i in range(0, rows):

    for j in range(0, k):
        print(end=" ")
    k = k - 2

    for j in range(0, i + 1):
        print("* ", end="")
    print("")
```

```
Number Of Rows
5
        *
      * *
    * * *
  * * * *
* * * * *
```

Question – 2.2

```python
numberOfRow = int(input("Number Of Rows"))
startingNumber = int(input("Starting Number"))

print("Required pattern is As Follow: ")
for i in range(0, numberOfRow):
    for j in range(0, 7):
        print(startingNumber-i, end=" ")
    print()
```

```
Number Of Rows5
Starting Number8
Required pattern is As Follow:
8 8 8 8 8 8 8
7 7 7 7 7 7 7
6 6 6 6 6 6 6
5 5 5 5 5 5 5
4 4 4 4 4 4 4
```

Question – 3

```python
count = 0
for i in range(1, 10):
    count = i
    for j in range(1, 10):
        print(count,end=" ")
        count += 1
        if count > 9:
            count = 1
    print()
```

```
1 2 3 4 5 6 7 8 9
2 3 4 5 6 7 8 9 1
3 4 5 6 7 8 9 1 2
4 5 6 7 8 9 1 2 3
5 6 7 8 9 1 2 3 4
6 7 8 9 1 2 3 4 5
7 8 9 1 2 3 4 5 6
8 9 1 2 3 4 5 6 7
9 1 2 3 4 5 6 7 8
```

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Question – 4

```python
n=int(input("Enter the range of number:\n"))
sum=0
p=9
for i in range(1,n+1):
    sum += p
    p=(p*10)+9
print("The sum of the series 9 + 99 + 999 ... = ",sum)
```

```
Enter the range of number:
6
The sum of the series 9 + 99 + 999 ... =  1111104
```

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Question – 5

```python
n=int(input("Enter number: "))

temp=n
rev=0

while(n>0):
    dig=n%10
    rev=rev*10+dig
    n=n//10

if(temp==rev):
    num = 1
    while temp >= 1:
        num = num * temp
        temp = temp - 1
    print("The number is a palindrome!")
    print(f"The Factorial Is {num}")
else:
```

```
    print("The number isn't a palindrome!")
```

```
Enter number: 33
The number is a palindrome!
The Factorial Is 8683317618811886495518194401280000000
PS C:\Users\Prashant\OneDrive\Desktop\Coding\GitHub\Sem2-Lab3> python -u "c:\Users\Prashant\OneDrive\Desktop\Coding\GitHub\Sem2-Lab3\
5.py"
Enter number: 23
The number isn't a palindrome!
PS C:\Users\Prashant\OneDrive\Desktop\Coding\GitHub\Sem2-Lab3> python -u "c:\Users\Prashant\OneDrive\Desktop\Coding\GitHub\Sem2-Lab3\
5.py"
Enter number: 5
The number is a palindrome!
The Factorial Is 120
PS C:\Users\Prashant\OneDrive\Desktop\Coding\GitHub\Sem2-Lab3>
```

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Question – 6

```python
num = int(input("Enter a number ( greater than 1)\n"))
f = 0
i = 2
while(i <= num / 2):
    if num % i == 0:
        f=1
        break
    i=i+1

if f==0:
    print("The entered number is a PRIME number")
    count = 0
    while (num != 0):
        num //= 10
        count += 1
    print(f"Number Of Digits {count}")

else:
    print("The entered number is not a PRIME number")
```

```
Enter a number ( greater than 1)
7
The entered number is a PRIME number
Number Of Digits 1
PS C:\Users\Prashant\OneDrive\Desktop\Coding\GitHub\Sem2-Lab3> python -u "c:\Users\Prashant\OneDrive\Desktop\Coding\GitHub\Sem2-Lab3\
6.py"
Enter a number ( greater than 1)
87
The entered number is not a PRIME number
PS C:\Users\Prashant\OneDrive\Desktop\Coding\GitHub\Sem2-Lab3>
```