Report for Lab-01(Exercise):

Question-01:

To solve this problem an 'IF' condition has been used to fulfill the condition of printing sum of the given numbers.

```
number1= int(input("Enter the number: "))
number2= int(input("Enter the numberr: "))
product= number1*number2
sum=number1+number2
print(f'Product is {product}');
if(product>1000):
 print(f'Sum is {sum}');
```

```
Enter the number: 100
Enter the numberr: 50
Product is 5000
Sum is 150
```

Question-02:

To solve this problem formulas of area & radius has been used.

```
radius=int(input("Enter the radius: "))
area=3.1416*radius*radius
perimeter=2*3.1416*radius
print(f'Radius is {radius}');
print(f'Perimeter is {perimeter}');
```

```
Enter the radius: 4
Radius is 4
Perimeter is 25.1328
```

Question-03:

To solve this problem a ‘function’ has been created where the formula which has been given in question is used.

```
P=float(input("Enter the principle amount: "))
R=float(input('Enter the interest rate: '))
T=float(input("Enter the time: "))
def compound_interset_2022_3_60_317 (P,R,T):
 A=P*(1+R/100)**T
 return A
amount= compound_interset_2022_3_60_317(P,R,T)
interest= amount-P;

print(f'Interest after {T} year is {interest}')
```

```
Enter the principle amount: 1200
Enter the interest rate: 5
Enter the time: 3
Interest after 3.0 year is 189.1500000000001
```

Question-04:

To solve this problem a ‘for loop’ has been used to count the total of the given series.

```
N=int(input("Enter the range: "))
total=0;
for i in range(1,N+1):
  total=total+i**2


print(f'Total is {total}')
```

```
Enter the range: 5
Total is 55
```

Question-05:

To find if a number is prime or, not a ‘function’ has been used in which a ‘For loop’ with ‘If’ ‘else’ condition has been used.

```
N=int(input("Enter the number: "))
total=0;
def prime_find_2022_3_60_317(N,total):
  for i in range(2,N):
    if((N%i)==0):
      total=total+1
    else:
      total=total+0
  if(total==0):
    return True
  else:
    return False
if prime_find_2022_3_60_317(N,total):
 print(f'The number is prime')
else:
  print(f'The number is not prime')
```

```
Enter the number: 7
The number is prime
```

Question-06:

To find the n’th fibonacci number 2 initial variables has been given in question already, we just used a ‘For loop’ to solve it.

```
[ ] n=int(input("Enter the number: "))
    total=0;
    F0=0
    F1=1
    for i in range(1,N):
      temp=F0+F1
      F0=F1
      F1=temp


    print(f'{n}th fibonacci number is {F1}' )
```

```
Enter the number: 7
7th fibonacci number is 13
```

Question-07:

To calculate the sum of the hardcoded list we have used ‘For loop’.

```
[ ]  L=[1,2,3,4,5]
     sum=0
     for i in L:
       sum=sum+i

     print(f'Sum is {sum}')
```

```
Sum is 15
```

Question-08:

To calculate the sum of the even indexed number from a hardcoded list we have used ‘For loop’ in which an ‘If’ condition has been implemented.

```
L=[1,2,3,4,5]
sum=0
for i in range(0,len(L)):
  if(i%2==0):
    sum=sum+L[i]

print(f'Sum is {sum}')
```

```
Sum is 9
```

Question-09:

To find the minimum & maximum number from a hardcoded list of numbers we used 2 ‘functions’ including ‘For loop’ & ‘condition’ then just called those functions to print the desired output.

```
L=[1,2,3,4,5]
def smallest_number_2022_3_60_317(L):
  min_val=L[0]
  for i in range(0,len(L)):
    if(L[i]<min_val):
      min_val=L[i]
  return min_val;

def largest_number_2022_3_60_317(L):
  max_val=L[0]
  for i in range(0,len(L)):
   if(L[i]>max_val):
    max_val=L[i]
  return max_val

min_result=smallest_number_2022_3_60_317(L)
max_result=largest_number_2022_3_60_317(L)

print(f'max is {max_result}')
print(f' min is  {min_result}')
```

```
max is 5
 min is  1
```

Question-10:

To find the second largest number from a hardcoded list of numbers we used a ‘Function’ in which a variable has been taken to store the second largest number using a ‘loop’ & ‘conditions’ then just called those functions to print the desired output.

```
L=[1,2,3,4,5]

def second_largest_number_2022_3_60_317(L):
  max_val=L[0]
  max_val2=max_val
  for i in range(0,len(L)):
   if(L[i]>max_val):
    max_val2=max_val
    max_val=L[i]
  return max_val2

max_result=second_largest_number_2022_3_60_317(L)

print(f'Second max is {max_result}')
```

```
Second max is 4
```

Question-11:

To find even indexed characters in a given string a ‘For loop’ with ‘Condition’ has been used.

```
string=input("Enter the string: ")
for i in range(len(string)):
  if(i%2==0):
    print(f'Even characters at index {i} is {string[i]}')
```

```
Enter the string: i hate study
Even characters at index 0 is i
Even characters at index 2 is h
Even characters at index 4 is t
Even characters at index 6 is
Even characters at index 8 is t
Even characters at index 10 is d
```

Question-12:

To remove characters from a given string starting from zero up to n'th given number index, we have used 'For loop' with condition. We also implemented 'if' 'else' conditions to check if the length of the string is greater than the given integer, if not then an error text will be shown.

```
[ ]  string=input("Enter the string: ")
     num=int(input("Enter the number: "))
     string2=""
     if(num<len(string)):
       for i in range(len(string)):
         if(i>=num):
           string2=string2+string[i]

       print(f'New text is {string2}')
     else:
       print(f'Error')
```

```
Enter the string: lala
Enter the number: 2
New text is la
```

Question-13:

To check how many times CSE303 has appeared in the given string we used 'loop' & v'conditions' where we stored the given text in a variable previously & to track the string's index we took a variable j.

```
string=input("Enter the text: ")
count=0
string2="CSE303"
j=0
for i in range(len(string)):
  if(string[i]!=string2[j]):
    j=0
  elif(j==5):
    count=count+1
    j=0
  else:
    j=j+1
print(f'{count}')
```

```
Enter the text: CSE303jssdfCSE303
2
```

Question-14:

To check if the given string is palindrome or, not a 'Function' has been created in which we used a 'For loop' using len(string)-1,-1,-1 to read the string backward.

```
string=input("Enter the text: ")

def palindrome_checker_2022_3_60_317(string):
  string2=""
  for i in range(len(string)-1,-1,-1):
    string2=string2+string[i]
  if(string==string2):
    return True
  else:
    return False

if(palindrome_checker_2022_3_60_317(string)):
  print(f'Text is palindrome')
else:
  print(f'Text is not palindrome')
```

```
Enter the text: madam
Text is palindrome
```

Question-15:

To create a list3 with the odd numbers from list1 & even numbers from list2 & those has been created previously we used 'loop' with condition list1%2!=0 for odd numbers & list2%2==0 for even numbers.

```python
list1=[1,2,3,4,5]
list2=[6,7,8,9,10]
list3=[]

for i in range(len(list1)):
  if(list1[i]%2!=0):
    list3.append(list1[i])
  elif(list2[i]%2==0):
    list3.append(list2[i])

print(f'New list is {list3}')
```

```
New list is [1, 3, 5]
```