TASK - 6.1

Implement the text file

Aim: To Produce a various text file of Python Programming

Algorithm:

1. Start the Program
2. Print a welcome message: outputs a simple greeting
3. Determine and Print the number of students uses len() to find the number of element in the students-name list
4. Print the type of list: uses type() to show the type of the student_names and student_grades lists
5. find and Print hight and lowest grades: uses max() and min() and min() to determine the Highest and lowest value in students.
6. Print sorted list of grades: uses sorted() to sort the grades
7. Print reversed list of grades: uses reversed() to reverse the sorted list and convets it is a list
8. Generate and Print a range indices users range() to create a list of indices from 1 to the

output

Enter the score : 60

grade : is 0

number of students

4 sto?

Program

```
def analyze_student_grades():
    # sample data
    student_names = ["Alica", "Bob", "charlie", "Diana"]
    student_grades = [85, 92, 78, 90]
    # 1. Print a welcome message
    Print("welCome to the student Grades Analyzer!\n")
    # 2. Determine and Print the number of students
    num_students = len(student_names)
    Print("Number of students", num_students)
    # 3 Print the type of the student names list and
      the grades list
    Print("\nType of studen_names list :", type(stodent
      names))
    Print("Type of student_grades list:", type(student
      _grades))
    # 4. find and Print the highest and lowest grade
      highest_grade = max(student_grades)
      lowest_grade = min(student_grades)
      Print("\n Highest grade", highest_grade)
      Print("lowest grade :", lowest_grade)
    # 5 Print the list of grades and
    sorted_grades = sorted(student_grades)
```

```
Print ("Insorted grades ", sorted_grades)
# 6. Print the list of grades in reverse order
reversed_grades = list (reversed (sorted_grades ))
Print ("Reversed grades : reversed_grades)).
# 7. Generate and Print a range of grade indices
from 1 to the number of student grade_indices
= list (range (1, num_student +1))
Print ("In Grade indices from 1 to number of students
grade_indices )
# Run the analysis
analyze_student_grades()
```

Result: Thus the c Program to implement the various text file is executed verified successfully.

TASK - 6.2

Aim: To write the Python Programming of various text file

Algorithm:

1. Start the Program
2. user Input for Number: The Program prompts the user to enter two number.
3. user Input for operation The Program prompts the user to choose an arithmetic operation
4. Perform operation based on the user choice the Program Perform the chosen arithmic operation using the defined function
5. Display Result: The Program display the result of the operation.
6. Stop

Program

```
def add(a,b):
    """Return the sum of two numbers:"""
    return a+b
    def subtract(a,b):
```

output

The first 10 natural numbers are

1
2
3
4
5
6
7
8
9
10

```
"""Return the difference between two numbers."""
return a-b
def multiply(a,b)
  """Return the Product of two number """
    return a*b
def divide(a,b):
  """Return the quotient of two number Handlees
  division by zero """
  if b!=0
    return a/b
  else:
  return "Error Division by zero".
def greet(name):
return f"Hello {name}! welcome to the Program"
def main()
# Demonstrating the uses of user-defined function
# Arithmetic Operations
  num1 = 10
  num2 = 5
  Print("Arithmetic Operations:")
  Print(f sum of {num1} and {num2}:" add(num1,
  num2))
Print(f" Difference between {num1} and {num2}:
Subtract(num1,num2))
Print(f" Product of {num1} and {num2}:",multiply
(num1,num2))
```

```
# Greeting the user
user_name = "Alice"
Print ("\n Greeting.")
Print (greet (user_name))

# Run the main function
if __name__ == "__main__":
    main()
```

VEL TECH - CSE	
EX NO.	6
PERFORMANCE (5)	5
RESULT AND ANALYSIS (3)	3
VIVA VOCE (3)	3
RECORD (4)	4
TOTAL (15)	
SIGN WITH DATE	15

Result:

Thus the Python Program using function's concepts was successfully executed and the output was verified