PRACTICAL NO. 3

AIM: a) write a program to demonstrate story telling app using python .

b) define functions.

c)Write a program to make a calculator having different functions.

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a)write a program to define structure and pointers.

THEORY:

In this program, we define a story as a list of strings, where each string represents a line in the story. We then use a for loop to print each line of the story with a delay of 2 seconds between each line, using the time.sleep() function to pause the program for 2 seconds before printing the next line.

Code:

```
import time

print("Welcome to the Story Telling App!\n")


# Define the story as a list of strings

story = [

    "Once upon a time, there was a brave knight named Sir Lancelot.",

    "Sir Lancelot was on a quest to rescue a beautiful princess from a wicked dragon.",

    "He traveled through dark forests and treacherous mountains, facing many challenges along the way.",

    "Finally, he reached the dragon's lair and engaged it in a fierce battle.",

    "After a long and difficult fight, Sir Lancelot emerged victorious and rescued the princess.",
```

"They returned to the kingdom as heroes, and were celebrated by all the people for their bravery and valor."

]

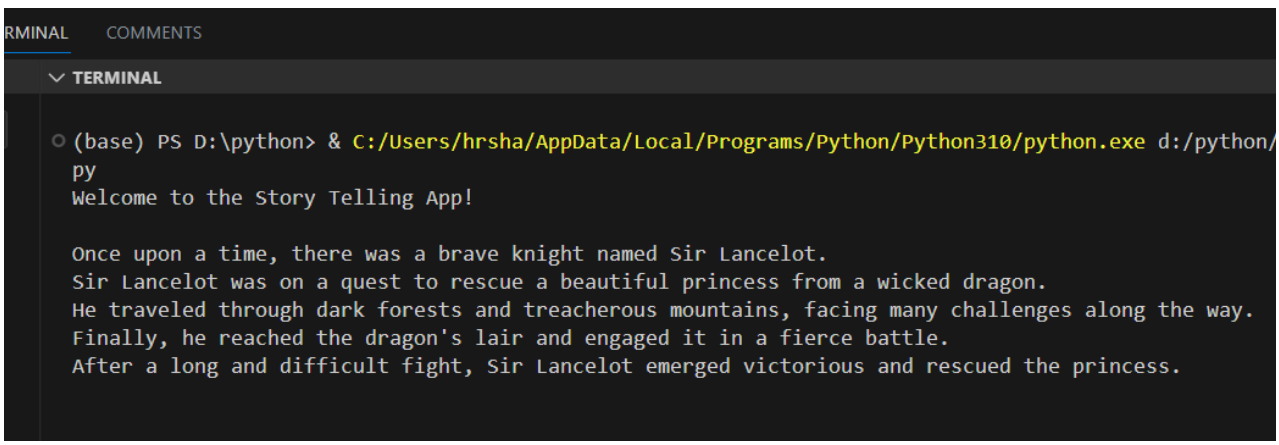
Print each line of the story with a delay of 2 seconds between each line

for line in story:

print(line)

time.sleep(2)

print("\nThe End.")



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b) define functions.

Theory

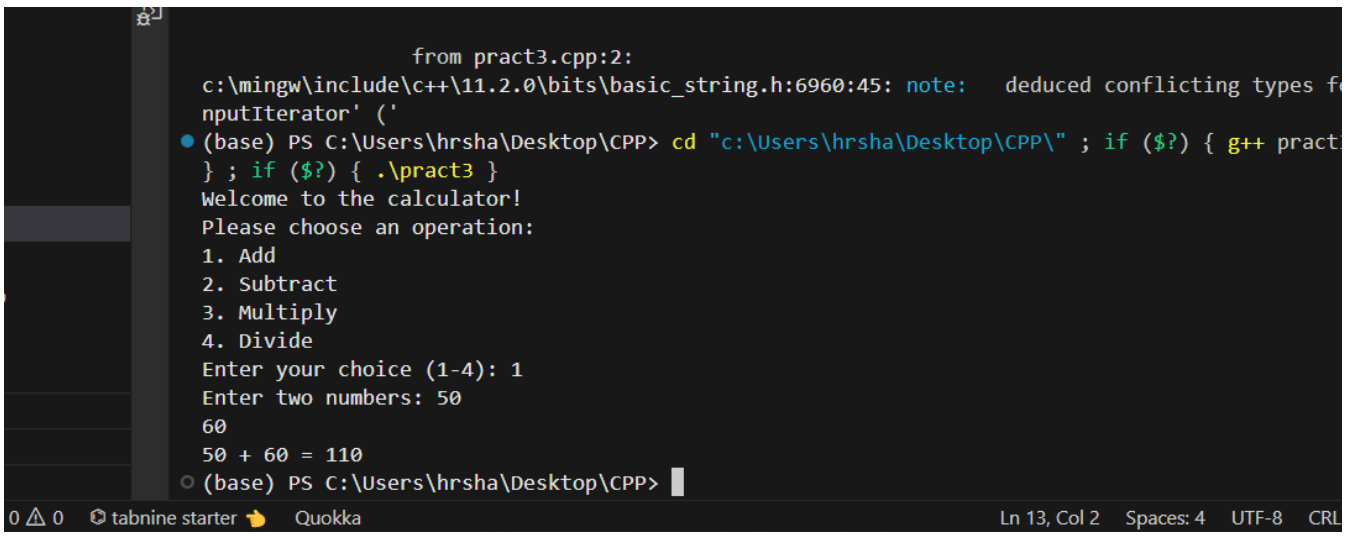
In programming, functions are self-contained blocks of code that perform a specific task. Functions can be called multiple times from different parts of a program, making them a useful tool for reducing code duplication and improving code organization. Functions typically take in input values called arguments, and return output values. A function definition typically consists of a function name, the arguments it takes (if any), and the code that is executed when the function is called.

Code:

```
#include <iostream>


int add(int x, int y) {
    return x + y;
}


int subtract(int x, int y) {
    return x - y;
}


int multiply(int x, int y) {
    return x * y;
}


float divide(float x, float y) {
    return x / y;
}


int main() {
    int choice;
    int num1, num2;
    std::cout << "Welcome to the calculator!" << std::endl;
```

```
std::cout << "Please choose an operation:" << std::endl;
std::cout << "1. Add" << std::endl;
std::cout << "2. Subtract" << std::endl;
std::cout << "3. Multiply" << std::endl;
std::cout << "4. Divide" << std::endl;
std::cout << "Enter your choice (1-4): ";
std::cin >> choice;
std::cout << "Enter two numbers: ";
std::cin >> num1 >> num2;
switch(choice) {
    case 1:
        std::cout << num1 << " + " << num2 << " = " << add(num1, num2) << std::endl;
        break;
    case 2:
        std::cout << num1 << " - " << num2 << " = " << subtract(num1, num2) << std::endl;
        break;
    case 3:
        std::cout << num1 << " * " << num2 << " = " << multiply(num1, num2) << std::endl;
        break;
    case 4:
        if (num2 == 0) {
            std::cout << "Error: division by zero" << std::endl;
        } else {
```

```
            std::cout << num1 << " / " << num2 << " = " << divide(num1, num2) << std::endl;
        }
        break;
    default:
        std::cout << "Invalid choice" << std::endl;
  }
  return 0;
}
```



CONCLUSION:

Thus we have successfully executed programs .