

EXPERIMENT - 01

* Installation, Environment Setup and starting with C language.

1) Write a program to print "Hello World."

* Algorithm :-

1. Start.

2. Include header file:-

3. Define main function.

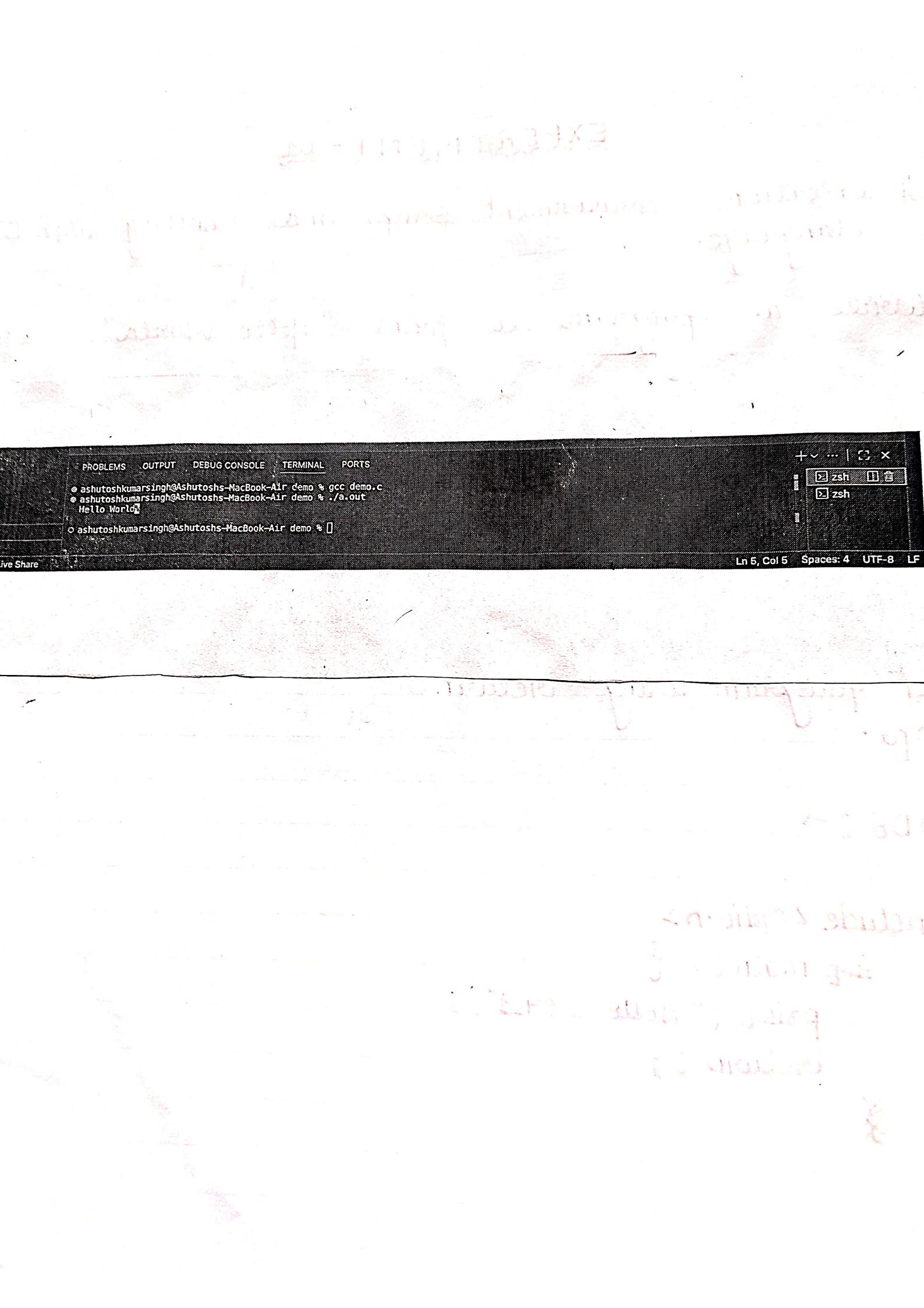
4. Print "Hello World".

5. End program using 'return 0'

6. Stop.

* CODE :-

```
# include <stdio.h>
int main() {
    print ("Hello World");
    return 0;
}
```



PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
ashutoshkumarsingh@Ashutoshs-MacBook-Air demo % gcc demo.c
ashutoshkumarsingh@Ashutoshs-MacBook-Air demo % ./a.out
Hello World!
```

```
ashutoshkumarsingh@Ashutoshs-MacBook-Air demo %
```

Live Share Ln 6, Col 5 Spaces: 4 UTF-8 LF

2.) Write a C program to print the address in multiple lines (new line).

* Algorithm :-

1. Start
2. Include header file (<stdio.h>)
3. Define main function.
4. Print each line of the address.
5. Insert \n after each line (new line).
6. End the program using return 0.
7. Stop.

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

- ashutoshkumarsingh@Ashutoshs-MacBook-Air prg % gcc hello.c
- ashutoshkumarsingh@Ashutoshs-MacBook-Air prg % ./a.out
Ashutosh Singh
Off Cmpus Upes
UPES Dehradun
- ashutoshkumarsingh@Ashutoshs-MacBook-Air prg %

* CODE :-

```
#include <stdio.h>
```

```
int main() {
```

// Printing address in multiple lines.

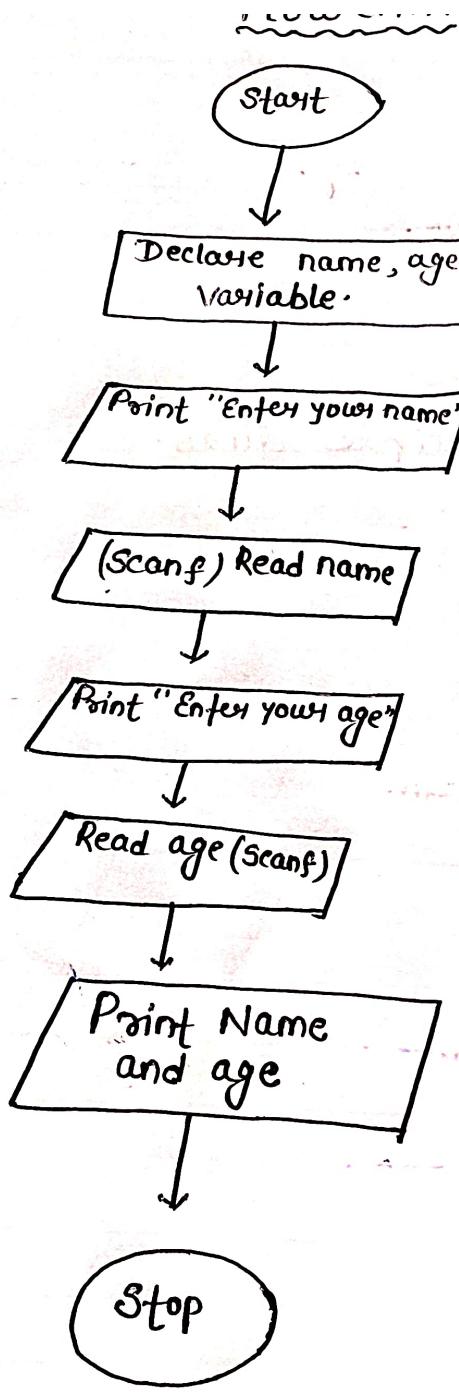
```
printf ("Ashutosh Singh\n");
```

```
printf ("Off Campus Upes\n");
```

```
printf ("UPES Dehradun\n");
```

```
return 0;
```

}



3) Write a program to print that prompts the user to enter their name and age.

* Algorithm :-

1. Start
2. Declare variables (name, age)
3. Print for the user to enter their name.
4. Read the name using 'scanf'.
5. Print for the user to enter their age.
6. Read the age using 'scanf'.
7. Display the name and age.
8. Stop.

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

- ashutoshkumarsingh@Ashutoshs-MacBook-Air prg % gcc hello.c
- ashutoshkumarsingh@Ashutoshs-MacBook-Air prg % ./a.out
- enter your name:Ashutosh
- enter your age:19
- name :Ashutosh
- age :19
- ashutoshkumarsingh@Ashutoshs-MacBook-Air prg %

CODE : →

```
#include <stdio.h>
int main() {
    char name[30]; // Declare char to store name.
    int age; // Declare int to store age.
```

// Asking the user to enter their name.

```
printf("Enter your name : ");
scanf("%s", name);
```

// Asking the user to enter their age.

```
printf("Enter your age : ");
scanf("%d", &age);
```

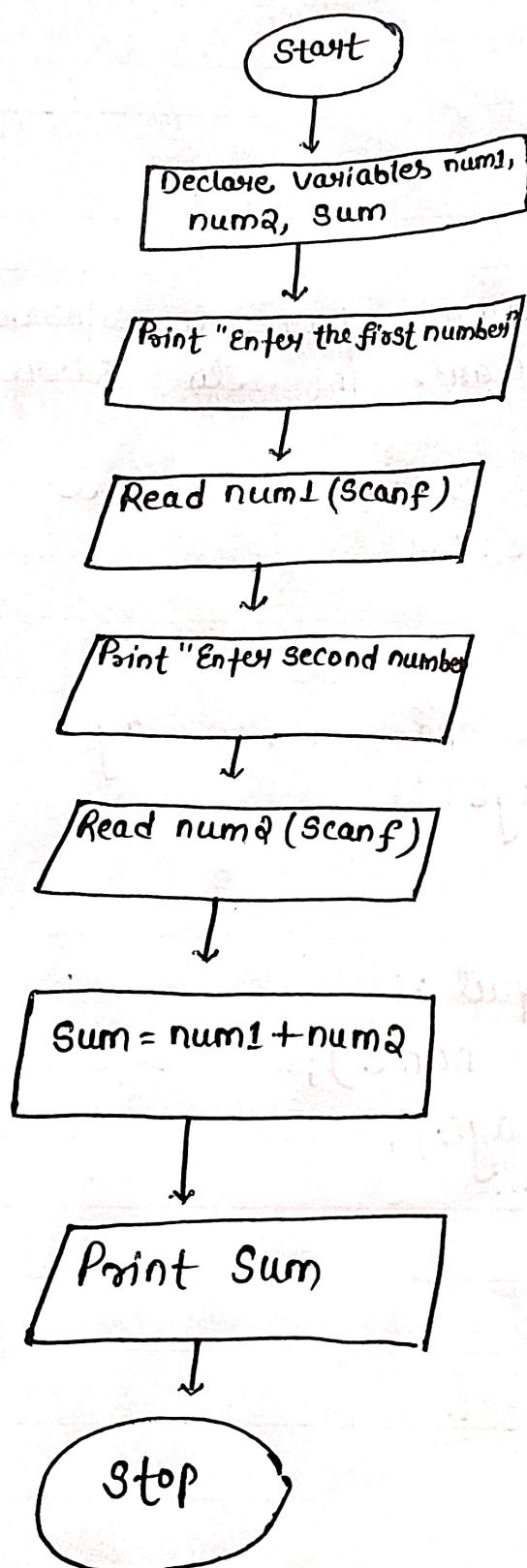
// Displaying the output :

```
printf("Name : %s\n", name);
printf("age : %d\n", age);
```

```
return 0;
```

3

Flowchart



4) Write a C program to add two numbers, take number from user.

* Algorithm :-

1. Start.
2. Declare variables num1, num2, Atmnum3 Sum)
3. Print "Enter first number:"
4. Read the number using scanf ("%d", &Num1)
5. Print " Enter second number:"
6. Read the second number using scanf ("%d ", &num2)
7. Calculate sum = num1 + num2
8. Show output 'sum'
9. Stop.

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
ashutoshkumarsingh@Ashutoshs-MacBook-Air prg % gcc hello.c
ashutoshkumarsingh@Ashutoshs-MacBook-Air prg % ./a.out
Hello World
● ashutoshkumarsingh@Ashutoshs-MacBook-Air prg % clear
● ashutoshkumarsingh@Ashutoshs-MacBook-Air prg % gcc hello.c
● ashutoshkumarsingh@Ashutoshs-MacBook-Air prg % ./a.out
enter first number:12
enter second number:10
the sum is:22
○ ashutoshkumarsingh@Ashutoshs-MacBook-Air prg %
```

* CODE : →

```
#include <stdio.h>
int int main () {
    int num1, num2, sum; // Taking variables.
    // Asking the user to enter first number.
    printf ("Enter first number:");
    scanf ("%d", &num1); // '&' is used for the address of num1.

    // Asking the user to enter second number.
    printf ("Enter second number:");
    scanf ("%d", &num2); // '&' is used for address of num2.

    // Calculate the sum of two numbers.
    sum = num1 + num2;

    // Displaying the output.
    printf ("The sum is : %d\n", sum);
    return 0;
}
```