C LAB REPORT

Experiment1 – Installation, Environment Setup & Basic C Programs

Q1. Write a C program to print “Hello World”.

Aim

To write a C program that displays **Hello World** on the screen.

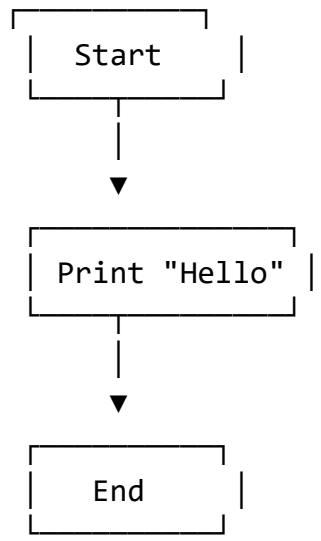
Algorithm

1. Start
2. Include stdio.h
3. Use `printf()` to print the message
4. End

Pseudocode

```
BEGIN
  PRINT "Hello World"
END
```

Flowchart (Text Format)

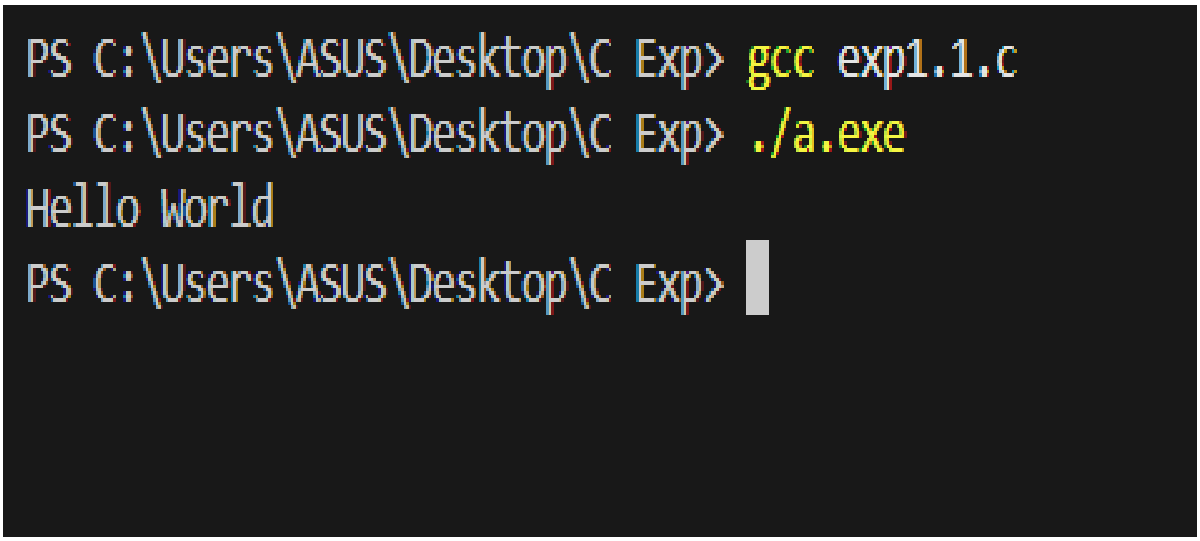


C Program

```c
#include <stdio.h>

int main() {
    printf("Hello World");
    return 0;
}
```

Output



Conclusion

The program successfully prints the message “Hello World”.

Q2. Write a C program to print the address in multiple lines using newline characters.

Aim

To print an address using \n for new lines.

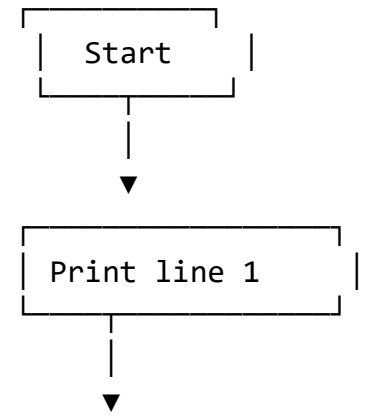
Algorithm

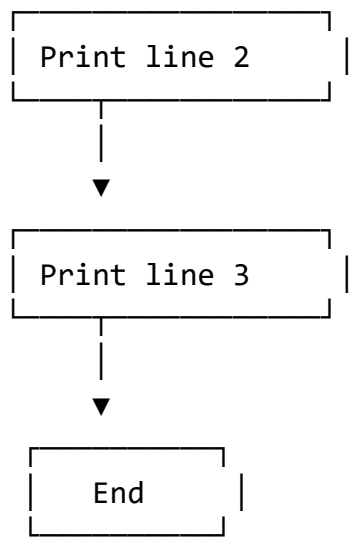
1. Start
2. Use `printf()` with newline characters
3. Print each line of the address
4. End

Pseudocode

```
BEGIN
  PRINT "House No. 123"
  PRINT "Sector 10"
  PRINT "New Delhi"
END
```

Flowchart





C Program

```
#include <stdio.h>

int main() {
    printf("House No. 123\n");
    printf("Sector 10\n");
    printf("New Delhi\n");
    return 0;
}
```

Output

```
PS C:\Users\ASUS\Desktop\C Exp> gcc exp1.2.c
PS C:\Users\ASUS\Desktop\C Exp> ./a.exe
Omkareshwar Chaubey
Inarbharwa
PS:-Ramnagar, PO:-Jogia
West Champaran
Bihar
PS C:\Users\ASUS\Desktop\C Exp>
```

Conclusion

The program successfully prints the address on multiple lines.

Q3. Write a C program that prompts the user to enter their name and age.

Aim

To read and display the user's name and age using input functions.

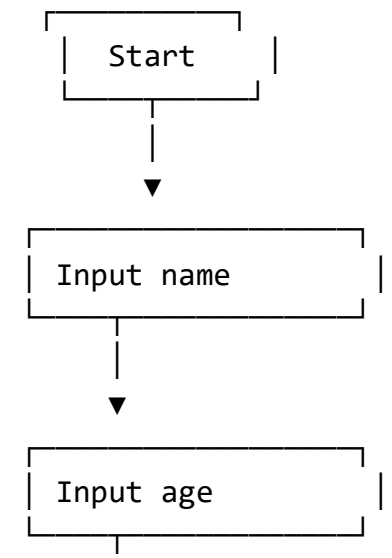
Algorithm

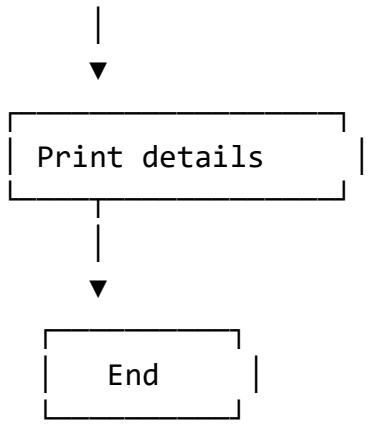
1. Start
2. Declare variables: name, age
3. Ask the user to enter name
4. Ask the user to enter age
5. Display the entered details
6. End

Pseudocode

```
BEGIN
  DECLARE name, age
  INPUT name
  INPUT age
  PRINT name and age
END
```

Flowchart





C Program

```
#include <stdio.h>

int main() {
    char name[20];
    int age;

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

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

    printf("Your name is %s and your age is %d\n", name, age);

    return 0;
}
```

Output

```
PS C:\Users\ASUS\Desktop\C Exp> gcc exp1.3.c
PS C:\Users\ASUS\Desktop\C Exp> ./a.exe
Enter your name: Omkareshwar
Enter your age: 17
Hello Omkareshwar!
You are 17 years old.
PS C:\Users\ASUS\Desktop\C Exp>
```

Conclusion

The program accepts user input and prints it correctly.

Q4. Write a C program to add two numbers taken from the user.

Aim

To input two numbers and display their sum.

Algorithm

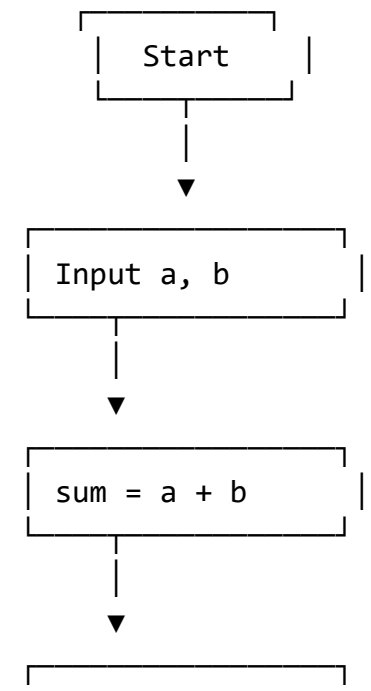
1. Start

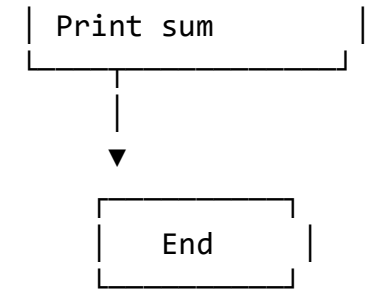
2. Declare variables a, b, sum
3. Ask user for two numbers
4. Read input
5. sum = a + b
6. Display sum
7. End

Pseudocode

```
BEGIN
  INPUT a
  INPUT b
  sum = a + b
  PRINT sum
END
```

Flowchart





C Program

```
#include <stdio.h>

int main() {
    int a, b, sum;

    printf("Enter two numbers: ");
    scanf("%d %d", &a, &b);

    sum = a + b;

    printf("Sum = %d\n", sum);

    return 0;
}
```

Output

```
PS C:\Users\ASUS\Desktop\C Exp> gcc exp1.4.c
PS C:\Users\ASUS\Desktop\C Exp> ./a.exe
Enter first number: 4
Enter second number: 5
The sum of 4 and 5 is 9
PS C:\Users\ASUS\Desktop\C Exp>
```

Conclusion

The program successfully calculates and displays the sum of two numbers.