

Lab Exercise - 2

❖ AIM :: WAP in C to implement basic operations in different functions on Linux using vi-Editor

Source_Code ::

```
#include <stdio.h>

// Function to find the greatest number among three numbers

int findGreatest(int a, int b, int c)
{
    if (a > b && a > c) {
        return a;
    } else if (b > c) {
        return b;
    } else {
        return c;
    }
}

// Function to check if a number is even or odd

void evenOdd(int num)
{
    if (num % 2 == 0) {
        printf("%d is Even\n", num);
    } else {
        printf("%d is Odd\n", num);
    }
}
```

// Function to check if a number is prime

void checkPrime(int num)

{

int i, flag = 0;

if (num <= 1) {

printf("%d is not a Prime number\n", num);

return;

}

for (i = 2; i <= num / 2; ++i) {

if (num % i == 0) {

flag = 1;

break;

}

}

if (flag == 0) {

printf("%d is a Prime number\n", num);

} else {

printf("%d is not a Prime number\n", num);

}

}

// Function to calculate the average of three numbers

double calculateAverage(int a, int b, int c) { return (a + b + c) / 3.0; }

int main()

{

printf("\n5C6 - Amit Singhal (11614802722)\n");

int num1, num2, num3;

int choice;

printf("\nChoose an operation:\n");

printf("1. Find Greatest of Three Numbers\n");

printf("2. Check Even or Odd\n");

```
printf("3. Check Prime Number\n");

printf("4. Calculate Average of Three Numbers\n");

printf("5. Exit\n");

while (1) {

    printf("\nEnter your choice: ");

    scanf("%d", &choice);

    switch (choice) {

        case 1:

            printf("\nEnter three numbers: ");

            scanf("%d %d %d", &num1, &num2, &num3);

            printf("Greatest Number: %d\n", findGreatest(num1, num2, num3));

            break;

        case 2:

            printf("\nEnter a number: ");

            scanf("%d", &num1);

            evenOdd(num1);

            break;

        case 3:

            printf("\nEnter a number: ");

            scanf("%d", &num1);

            checkPrime(num1);

            break;

        case 4:

            printf("\nEnter three numbers: ");

            scanf("%d %d %d", &num1, &num2, &num3);

            printf("Average: %.2f\n", calculateAverage(num1, num2, num3));

            break;

        case 5:

            printf("\n");

            return 0;

        default:
```

```
        printf("\nInvalid choice! Please choose again.\n");
    }
}
return 0;
}
```

Output ::

```
amit@Toshiba-Satellite-C850:~$ cd Desktop/Code/
amit@Toshiba-Satellite-C850:~/Desktop/Code$ vi basic_operations.c
amit@Toshiba-Satellite-C850:~/Desktop/Code$ gcc basic_operations.c -o basic_operations
amit@Toshiba-Satellite-C850:~/Desktop/Code$ ./basic_operations
```

5C6 - Amit Singhal (11614802722)

Choose an operation:

1. Find Greatest of Three Numbers
2. Check Even or Odd
3. Check Prime Number
4. Calculate Average of Three Numbers
5. Exit

Enter your choice: 1

Enter three numbers: 105 116 122

Greatest Number: 122

Enter your choice: 2

Enter a number: 13345

13345 is Odd

Enter your choice: 3

Enter a number: 5456527

5456527 is not a Prime number

Enter your choice: 4

Enter three numbers: 2234 4523 4355

Average: 3704.00

Enter your choice: 5

```
amit@Toshiba-Satellite-C850:~/Desktop/Code$ |
```