U19CS076

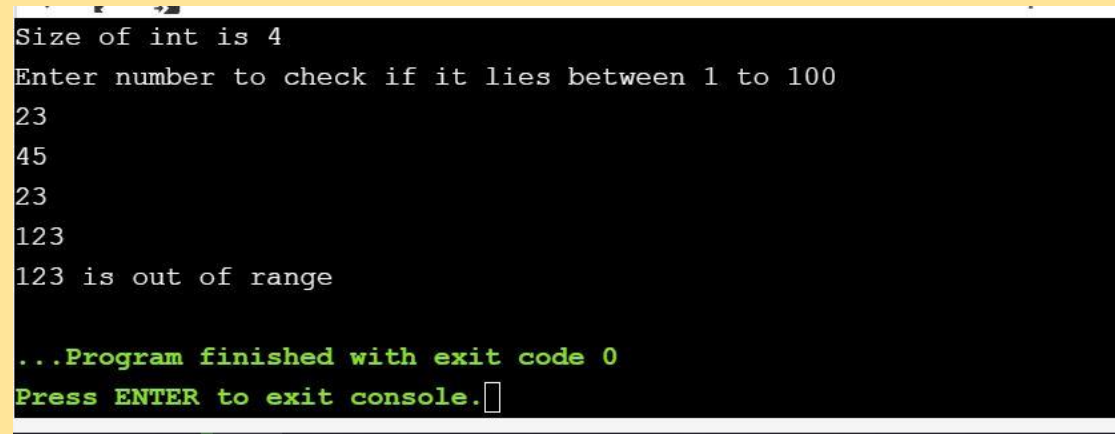## KRITHIKHA BALAMURUGAN

CO PRACTICAL2

Q1.

```c
#include <stdio.h>

int main() {
    int n;
    printf("Size of int is %ld\n", sizeof(n));
    printf("Enter number to check if it lies between 1 to 100\n");
    do{
        scanf("%d", &n);
    }while(n >= 1 && n <= 100);
    printf("%d is out of range", n);
     return 0;
}
```

```
Size of int is 4
Enter number to check if it lies between 1 to 100
23
45
23
123
123 is out of range

...Program finished with exit code 0
Press ENTER to exit console.
```

Q2.

//2

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

```c
#include <conio.h>

int main(int argc, char *argv[])
{
    double a,b;
    if( argc == 3 )
    {
        a=atoi(argv[1]);
    b=atoi(argv[2]);
    printf("Addition is: %lf",(a+b));
        printf("subtraction is: %lf",(a+b));
    printf("multiplication is: %lf",(a+b));
    printf("division is: %lf",(a+b));


    }
    else
    {
        printf("argument list is not proper .\n");
    }
    return 0;
}
```

Command line arguments: `12 2`
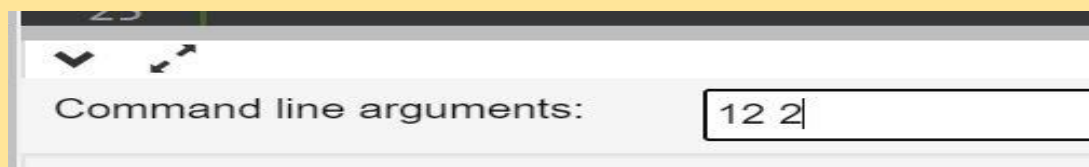
```
main.c:10:10: warning: implicit declaration of
Addition is: 14.000000
subtraction is: 10.000000
multiplication is: 24.000000
division is: 6.000000

...Program finished with exit code 0
Press ENTER to exit console.
```

Q3.

```c
#include <stdio.h>

#include <conio.h>


int main(int argc, char *argv[])
{
    const double a,b;
    printf("Enter 2 numbers\n");
  scanf("%lf %lf",&a,&b);
    printf("Addition is: %lf",(a+b));
        printf("\nsubtraction is: %lf",(a-b));
    printf("\nmultiplication is: %lf",(a*b));
    printf("\ndivision is: %lf",(a/b));



    return 0;
}
```

```
Enter 2 numbers
334.3
22
Addition is: 356.300000
subtraction is: 312.300000
multiplication is: 7354.600000
division is: 15.195455
```

Q4.

```c
#include <stdio.h>
int main(int argc,char* argv[])
{
if (argc==2){
      float a;
      printf("Enter number:");
      scanf("%f",&a);
      printf("various precision of float number:");
      printf("%.1f\n",a);
       printf("%.2f\n",a);
       printf("%.3f\n",a);
       printf("%.4f\n",a);
       printf("%.5f\n",a);
       printf("%f",a);
}
      else {

      printf("\n enter correct arg");


      }
      return 0;
```

}

```
Enter number:12.342
various precision of float number:12.3
12.34
12.342
12.3420
12.34200
12.342000

    Program finished with exit code 0
```

Q5.

```c
#include <stdio.h>


    int binAddition(int a,int b)
    {
            int c;
            while (b != 0) {
                    c = (a & b) << 1;
                    a=a^b;
                    b=c;
            }
            return a;
    }


    int binSubtracton(int a, int b)
    {
            int carry;
            b = binAddition(~b, 1);


            while (b != 0) {
```

```c
            carry = (a & b) << 1;

            a = a ^ b;

            b = carry;

        }

        return a;

}


int main()
{
        int number1,number2, binAdd, binSub;

        printf("Input first integer value: ");
        scanf("%d",&number1);

        printf("Input second integer value: ");
        scanf("%d",&number2);

        binAdd=binAddition(number1,number2);
        binSub=binSubtracton(number1,number2);

        printf("Binary Addition: %d\n",binAdd);
        printf("Binary Subtraction: %d\n",binSub);

        return 0;
}
```

```
Input first integer value: -10
Input second integer value: 2
Binary Addition: -8
Binary Subtraction: -12


...Program finished with exit code 0
Press ENTER to exit console.
```

Q6.

```c
#include <stdio.h>

int binaryproduct(int, int);

int main()
{

    long binary1, binary2, multiply = 0;
    int digit, factor = 1;

    printf("Enter the first binary number: ");
    scanf("%ld", &binary1);
    printf("Enter the second binary number: ");
    scanf("%ld", &binary2);
    while (binary2 != 0)
    {
        digit =   binary2 % 10;
        if (digit == 1)
        {
            binary1 = binary1 * factor;
```

```c
                multiply = binaryproduct(binary1, multiply);
        }
else
            binary1 = binary1 * factor;
        binary2 = binary2 / 10;
        factor = 10;
    }
    printf("Product of two binary numbers: %ld", multiply);
    return 0;
}


int binaryproduct(int binary1, int binary2)
{
    int i = 0, remainder = 0, sum[20];
    int binaryprod = 0;

    while (binary1 != 0 || binary2 != 0)
    {
        sum[i++] =(binary1 % 10 + binary2 % 10 + remainder) % 2;
        remainder =(binary1 % 10 + binary2 % 10 + remainder) / 2;
        binary1 = binary1 / 10;
        binary2 = binary2 / 10;
    }
    if (remainder != 0)
        sum[i++] = remainder;
    --i;
      while (i >= 0)
        binaryprod = binaryprod * 10 + sum[i--];
    return binaryprod;
```

}

```
Enter the first binary number: 111
Enter the second binary number: 101
Product of two binary numbers: 100011

...Program finished with exit code 0
Press ENTER to exit console.
```