

U19CS076

KRITHIKHA BALAMURUGAN

CO PRACTICAL2

Q1.

```
#include <math.h>
#include <stdio.h>
#define ll long long
int to_int(char* str)
{
    long long i,x;
    //testing negetive numbers with - ve sign
    for(x=0,i=0;str[i];++i)
    {
        if(i==0&&str[i]=='-')
            ++i;
        if(str[i]>='0'&&str[i]<='9')
            x=x*10+(str[i]-48);
        else
            break;
    }
    //making it positive
    if(str[0]=='-')
        x=-x;
    if(x!=(int)x)
        printf("The number is out of range\n");
    else
```

```

        printf("The number is in range\n");
        return (int)x;

    }

    int main(int argc, char const *argv[])
    {
        int i,sum=0;

        int a=to_int(argv[1]);

        return 0;
    }

```

```

C:\Users\krithikha\Desktop\svnit\sem3\comp org\co2>q1.exe 1234444555555555
The number is out of range

C:\Users\krithikha\Desktop\svnit\sem3\comp org\co2>q1.exe 12355
The number is in range

C:\Users\krithikha\Desktop\svnit\sem3\comp org\co2>

```

Q2.

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

```
#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\n",(a+b));
        printf("subtraction is: %lf\n",(a-b));
        printf("multiplication is: %lf\n",(a*b));
    }
}

```

```

        printf("division is: %lf\n", (a/b));

    }

    else

    {

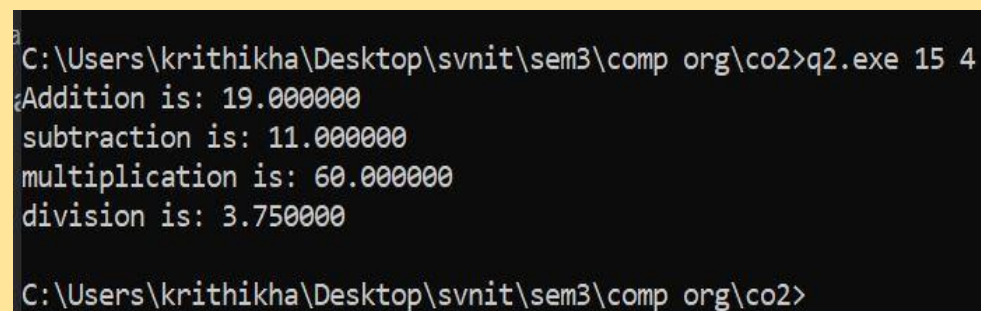
        printf("argument list is not proper .\n");

    }

    return 0;

}

```



```

C:\Users\krithikha\Desktop\svnit\sem3\comp org\co2>q2.exe 15 4
Addition is: 19.000000
subtraction is: 11.000000
multiplication is: 60.000000
division is: 3.750000
C:\Users\krithikha\Desktop\svnit\sem3\comp org\co2>

```

Q3.

```
#include <math.h>
```

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

```
int main(int argc, char const *argv[])
```

```
{
```

```
    int i, sum=0;
```

```
    const int a=atoi(argv[1]);
```

```
    const int b=atoi(argv[2]);
```

```
    printf("The Sum is %d\n", a+b);
```

```
    printf("The Subtraction is %d\n", a-b);
```

```
    printf("The Multiplication is %d\n", a*b);
```

```
    if(b!=0)
```

```

printf("The Division is %f\n", (float)a/(float)b);

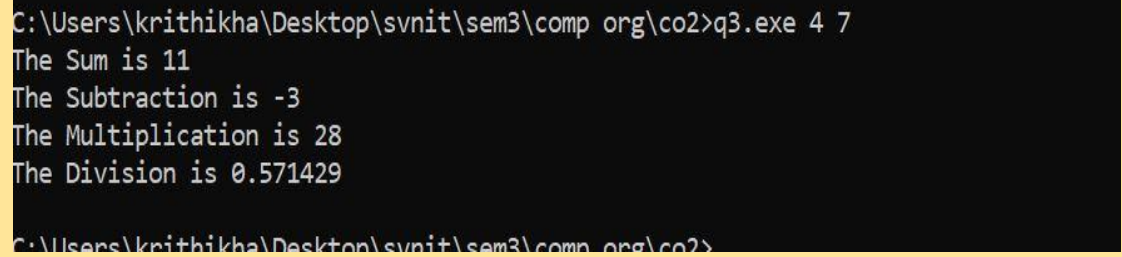
else

printf("Runtime Error\n");

return 0;

}

```



```

C:\Users\krithikha\Desktop\svnit\sem3\comp_org\co2>q3.exe 4 7
The Sum is 11
The Subtraction is -3
The Multiplication is 28
The Division is 0.571429
C:\Users\krithikha\Desktop\svnit\sem3\comp_org\co2>

```

Q4.

```
#include <math.h>
```

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

```
int main(int argc, char const *argv[])
```

```
{    float f;
```

```
    if(argc==1)
```

```
        printf("Enter 1 number");
```

```
    else
```

```
        f=atof(argv[1]);
```

```
    printf("\nnumber is %f\n",f);
```

```
    printf("---printing in different formats---\n",f);
```

```
    printf("%.1f\n",f);
```

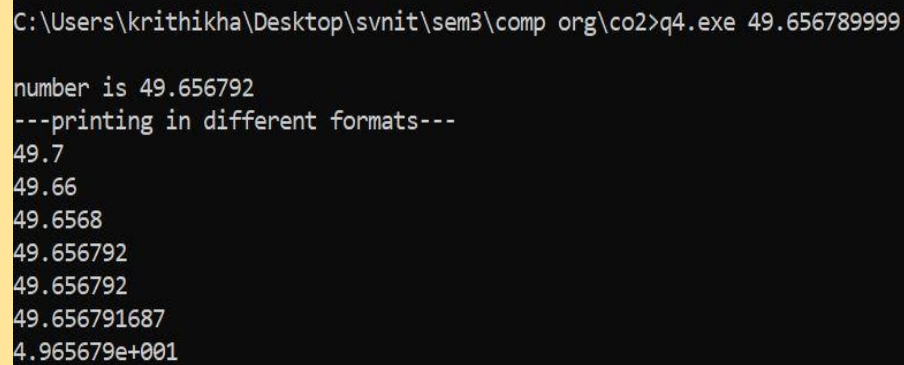
```
    printf("%.2f\n",f);
```

```
    printf("%g\n",f);
```

```

    printf("%lf\n",f);
    printf("%Lf\n",f);
    printf("%.9f\n",f);
    printf("%e\n",f);
    return 0;
}

```



```

C:\Users\krithikha\Desktop\svn\sem3\comp org\co2>q4.exe 49.656789999
number is 49.656792
---printing in different formats---
49.7
49.66
49.6568
49.656792
49.656792
49.656791687
4.965679e+001

```

Q5.

```

#include <stdio.h>
#include <math.h>
int main(int argc, char const *argv[])
{
    int i,sum=0;
    int n=atoi(argv[1]);
    int m=atoi(argv[2]);
    int s,d;
    s=convert(n)+convert(m);
    d=convert(n)-convert(m);
    printf("After adding these 2 binary numbers we get:\n binary :%llu \n and in
    decimal %d\n ",convert1(s),s);
    printf("After subtracting these 2 binary numbers we get:\n binary: %lld \n in
    decimal: %d",convert1(d),d);
    return 0;
}

```

```

int convert(long long n) {
    int dec = 0, i = 0, rem;
    while (n != 0) {
        rem = n % 10;
        n /= 10;
        dec += rem * pow(2, i);
        ++i;
    }
    return dec;
}

```

```

int convert1(int n) {
    long long bin = 0;
    int rem, i = 1;
    while (n != 0) {
        rem = n % 2;
        n /= 2;
        bin += rem * i;
        i *= 10;
    }
    return bin;
}

```

```

in decimal: 2
C:\Users\krithikha\Documents>q5new.exe 1100 1010
After adding these 2 binary numbers we get:
binary :10110
and in decimal 22
After subtracting these 2 binary numbers we get:
binary: 10
in decimal: 2
C:\Users\krithikha\Documents>

```

Q6.

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

```
#include <math.h>
```

```
int main(int argc, char const *argv[])
```

```
{
```

```
    int i,sum=0;
```

```
    int n=atoi(argv[1]);
```

```
    int m=atoi(argv[2]);
```

```
    int p;
```

```
p=convert(n)*convert(m);
```

```
printf("After multiplying these 2 binary numbers we get %lld in binary and %d in decimal",convert1(p),p);
```

```
    return 0;
```

```
}
```

```
int convert(long long n) {
```

```
    int dec = 0, i = 0, rem;
```

```
    while (n != 0) {
```

```
        rem = n % 10;
```

```
        n /= 10;
```

```
        dec += rem * pow(2, i);
```

```
        ++i;
```

```
    }
```

```
    return dec;
```

```
}
```

```
int convert1(int n) {
```

```
    long long bin = 0;
```

```
    int rem, i = 1;
```

```
    while (n != 0) {
```

```
        rem = n % 2;
```

```
n /= 2;  
bin += rem * i;  
i *= 10;  
}  
return bin;  
}
```

After multiplying these 2 binary numbers we get 1111000 in binary

```
C:\Users\krithikha\Desktop\svnit\sem3\comp org\co2>q6.exe 1100 1010
```

After multiplying these 2 binary numbers we get 1111000 in binary and 120 in decimal

```
C:\Users\krithikha\Desktop\svnit\sem3\comp org\co2>
```