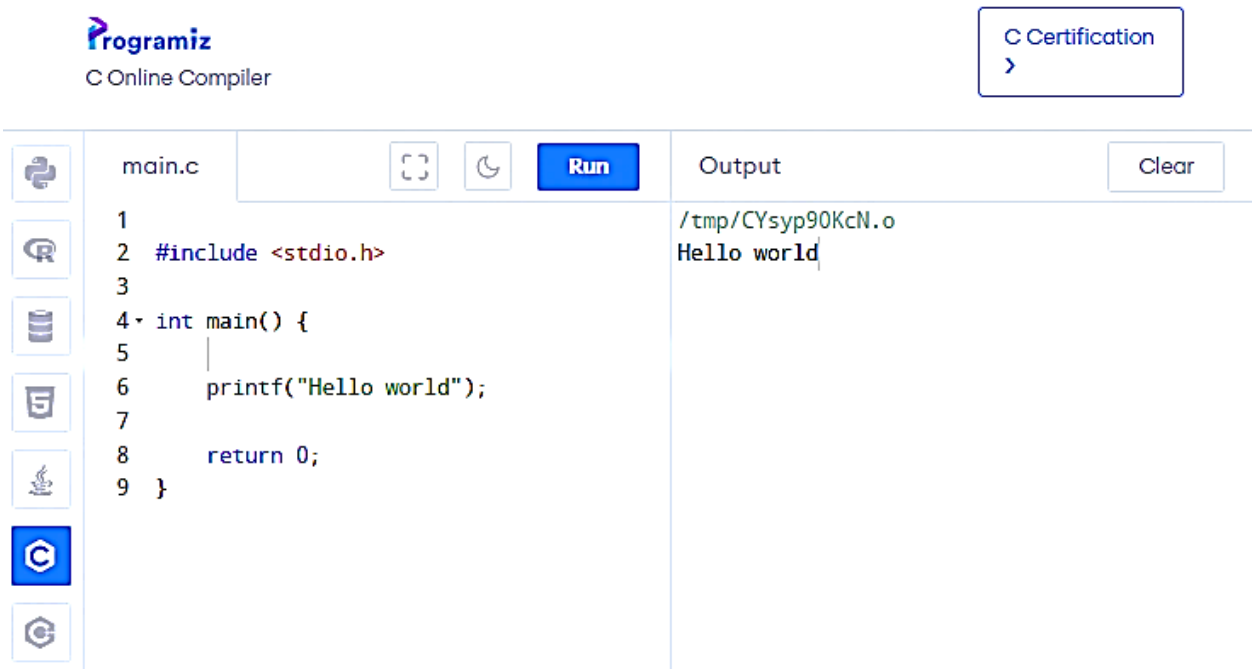
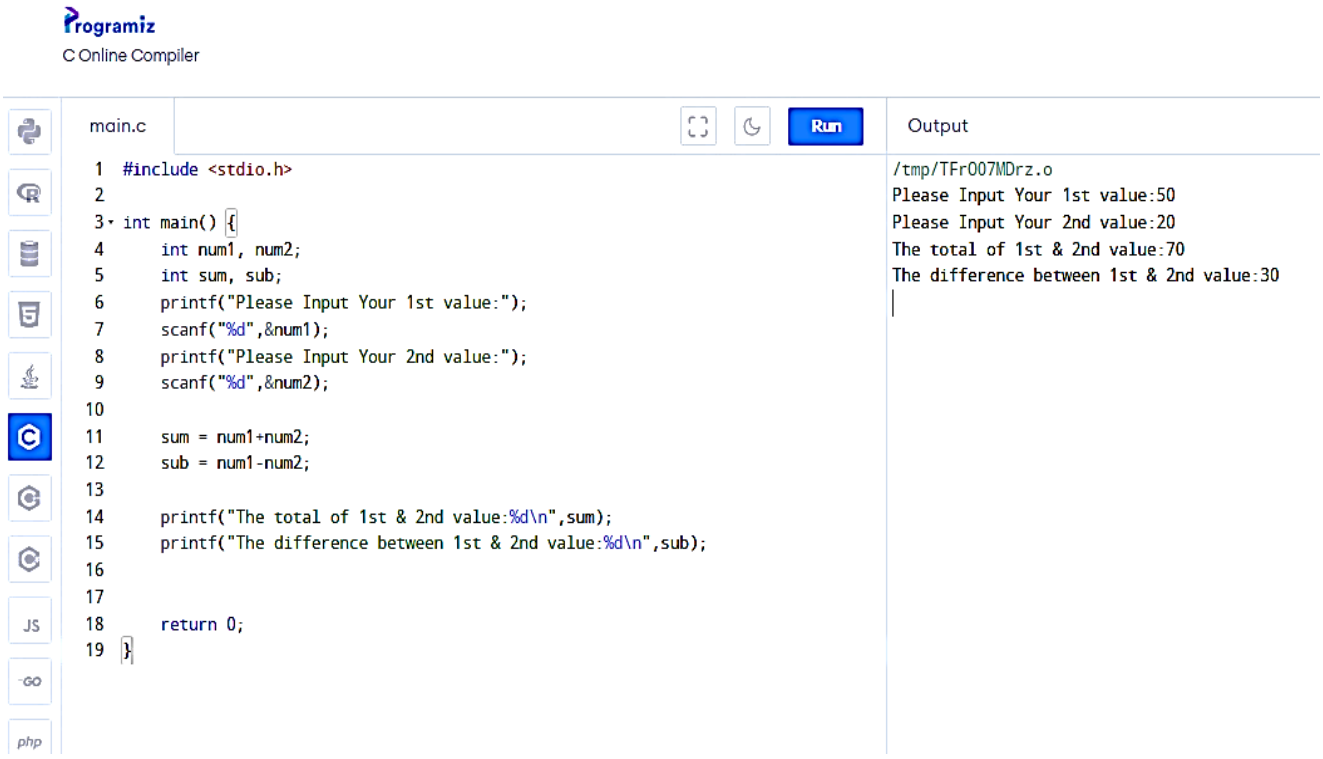
01. Print a String:



02. Sum & Sub between two numbers:



03. Using Switch case in Calculator:

Programiz C Online Compiler

main.c

```c
#include<stdio.h>
#include<math.h>
int e;
float a,b,c;
    int main()
    {
    start:
    printf("\nEnter your choice:\n1.Addition \n2.Subtraction \n3.Multiplication
        \n4.Divition \n5.Squar Root \n6.Exit\n");
    scanf("%d",&e);
    switch(e)
     {
         case 1:
          printf("\nEnter Two Value:\n");
          scanf("%f%f",&a,&b);
          c=a+b;
          printf("\nAddition result:%0.2f",c);
          break;
           case 2:
          printf("\nEnter Two Value:\n");
          scanf("%f%f",&a,&b);
          c=a-b;
          printf("\nSubtraction result:%0.2f",c);
          break;
           case 3:
          printf("\nEnter Two Value:\n");
          scanf("%f%f",&a,&b);
          c=a*b;
          printf("\nMultiplication result:%f",c);
          break;
           case 4:
          printf("\nEnter Two Value:\n");
          scanf("%f%f",&a,&b);
          c=a/b;
          printf("\nDivition result:%f",c);
          break;
           case 5:
          printf("\nEnter a Value:\n");
          scanf("%f",&a);
          c=sqrt(a);
          printf("\nSquar Root result:%0.2f",c);
          break;
          default:
              return 0;
    }
    goto start;
    return 0;
}
```

Output

```
/tmp/TFrO07MDrz.o
Enter your choice:
1.Addition
2.Subtraction
3.Multiplication
4.Divition
5.Squar Root
6.Exit
2
Enter Two Value:
54
23
Subtraction result:31.00
Enter your choice:
1.Addition
2.Subtraction
3.Multiplication
4.Divition
5.Squar Root
6.Exit
```

04. IF else:

main.c

```c
#include <stdio.h>

 int main()
 {

    int a;
    printf("Enter the valu of a:");
    scanf("%d",&a);
    if(a%2==0)
        printf("\nEVEN");
        else
        printf("\nODD");

    return 0;
 }
```

Output

```
/tmp/Efl0oi6cg4.o
Enter the valu of a:21
ODD
```

05. For Loop:

Programiz C Online Compiler

main.c

```c
#include <stdio.h>

int main() {
  int i;

  for (i = 1; i < 11; ++i)m
  {
    printf("%d ", i);
  }
  return 0;
}
```

Run

Output

```
/tmp/Efl0oi6cg4.o
1 2 3 4 5 6 7 8 9 10
```

06. Electricity Bill:

Programiz C Online Compiler

main.c

```c
#include <stdio.h>
int main() {
  int cust_no, units;
  float unitp;
  float bill;
     printf("Consumer ID Number:");
    scanf("%d",&cust_no);
    printf("Consumer Unit:");
    scanf("%d", &units);
       if (units>=0 && units <=200){
       bill = units * 0.50;
       unitp = 0.50;
    }
     else if (units>=201 && units <=400){
       bill = (200 * 0.50)+((units-200)*0.65);
       unitp = 0.65;
    }
    else if (units>=401 && units <=600){
       bill = (200 * 0.50)+(200*0.65) + ((units-400)*0.80);
       unitp = 0.80;
    }
     else {
       bill = (200 * 0.50)+(200*0.65)+(200*0.80) + ((units-600)*1);
       unitp = 1.00;
    }
       printf("\n Account Number of Consumer:%d",cust_no);
    printf("\n Total Power Consume:%d kWh", units);
    printf("\n Price of Per Unit:%0.2f TK", unitp);
    printf("\n Total bill have to pay: %0.2f TK",bill);
}
```

Run

Output

```
/tmp/RVxe13JfBM.o
Consumer ID Number:65463824
Consumer Unit:658
Account Number of Consumer:65463824
 Total Power Consume:658 kWh
 Price of Per Unit:1.00 TK
 Total bill have to pay: 448.00 TK
```

07. Result

Programiz C Online Compiler

main.c

Run

Output

```c
#include <stdio.h>
int main() {
  int eng,math,phy,che,ict,total,stu_id;
  float avg;

    printf("Input the ID of Student:");
    scanf("%d",&stu_id);
    printf("Enter the Mark of English:");
    scanf("%d",&eng);
    printf("Enter the Mark of Math:");
    scanf("%d",&math);
    printf("Enter the Mark of Physics:");
    scanf("%d",&phy);
    printf("Enter the Mark of Chemistry:");
    scanf("%d",&che);
    printf("Enter the Mark of ICT:");
    scanf("%d",&ict);

  total = eng+math+phy+che+ict;
  avg = total/5;

    printf("\nStudent ID:%d",stu_id);
    printf("\nTotal Mark:%d",total);
    printf("\nAvarage Mark:%0.2f",avg);

}
```

```
/tmp/RVxe13JfBM.o
Input the ID of Student:25456
Enter the Mark of English:85
Enter the Mark of Math:65
Enter the Mark of Physics:85
Enter the Mark of Chemistry:68
Enter the Mark of ICT:98
Student ID:25456
Total Mark:401
Avarage Mark:80.00
```

08. Area of triangle:

Programiz C Online Compiler

main.c

Run

Output

```c
#include <stdio.h>
#include <math.h>
int main()
{
  double a, b, c, s, area;

  printf("Enter 1st side value of a triangle:");
  scanf("%lf", &a);
   printf("Enter 2nd side value of a triangle:");
  scanf("%lf", &b);
   printf("Enter 3rd side value of a triangle:");
  scanf("%lf", &c);

  s = (a+b+c)/2; // Semiperimeter
  area = sqrt(s*(s-a)*(s-b)*(s-c));

  printf("Area of the triangle = %.2lf\n", area);

  return 0;
}
```

```
/tmp/RVxe13JfBM.o
Enter 1st side value of a triangle:25
Enter 2nd side value of a triangle:20
Enter 3rd side value of a triangle:20
Area of the triangle = 195.16
```

09. Pointer

Programiz C Online Compiler

main.c — Run — Output

```c
#include <stdio.h>
int main()
{
    int* pc, c;
    c = 22;
    printf("Address of c: %p\n", &c);
    printf("Value of c: %d\n\n", c);  // 22
    pc = &c;
    printf("Address of pointer pc: %p\n", pc);
    printf("Content of pointer pc: %d\n\n", *pc); // 22
    c = 11;
    printf("Address of pointer pc: %p\n", pc);
    printf("Content of pointer pc: %d\n\n", *pc); // 11
    *pc = 2;
    printf("Address of c: %p\n", &c);
    printf("Value of c: %d\n\n", c); // 2
    return 0;
}
```

```
/tmp/RVxe13JfBM.o
Address of c: 0x7ffc24c1c404
Value of c: 22

Address of pointer pc: 0x7ffc24c1c404
Content of pointer pc: 22

Address of pointer pc: 0x7ffc24c1c404
Content of pointer pc: 11

Address of c: 0x7ffc24c1c404
Value of c: 2
```

10. Swap Two Number

Programiz C Online Compiler

main.c — Run — Output

```c
#include<stdio.h>
int main() {
   double first, second, temp;
   printf("Enter first number: ");
   scanf("%lf", &first);
   printf("Enter second number: ");
   scanf("%lf", &second);

     temp = first;

     first = second;

     second = temp;

   printf("\nAfter swapping, first number = %.2lf\n", first);
   printf("After swapping, second number = %.2lf", second);
   return 0;
}

```

```
/tmp/RVxe13JfBM.o
Enter first number: 35
Enter second number: 25
After swapping, first number = 25.00
After swapping, second number = 35.00
```

11. Print ASCII Value:

Programiz C Online Compiler

main.c — Run — Output

```c
#include <stdio.h>
int main() {
     char c;
     printf("Enter a ASCII character: ");
     scanf("%c", &c);

     printf("ASCII value of %c = %d", c,c);

     return 0;
}
```

```
/tmp/RVxe13JfBM.o
Enter a ASCII character: %
ASCII value of % = 37
```

12. Break and Continue

i. Break

Programiz C Online Compiler

main.c

Run

Output

```c
#include <stdio.h>
int main()
{
    int i = 0, j = 0;

    for (int i = 0; i < 5; i++) {

        printf("i = %d, j = ", i);

        for (int j = 0; j < 5; j++) {

            if (j == 2)
                break;

            printf("%d ", j);
        }
        printf("\n");
    }
    return 0;
}
```

```
/tmp/RVxe13JfBM.o
i = 0, j = 0 1
i = 1, j = 0 1
i = 2, j = 0 1
i = 3, j = 0 1
i = 4, j = 0 1
```

ii. Continue

Programiz C Online Compiler

main.c

Run

Output

```c
#include <stdio.h>
int main()
{
    int i = 0, j = 0;

    for (int i = 0; i < 5; i++) {

        printf("i = %d, j = ", i);

        for (int j = 0; j < 5; j++) {

            if (j == 2)
                continue;

            printf("%d ", j);
        }
        printf("\n");
    }
    return 0;
}
```

```
/tmp/RVxe13JfBM.o
i = 0, j = 0 1 3 4
i = 1, j = 0 1 3 4
i = 2, j = 0 1 3 4
i = 3, j = 0 1 3 4
i = 4, j = 0 1 3 4
```

13. Arrays

Programiz C Online Compiler

main.c

Run

Output

```c
#include <stdio.h>
int main() {
  int values[7];

  printf("Enter 7 integers: ");

  for(int i = 0; i < 7; ++i) {
    scanf("%d", &values[i]);
  }

  printf("Displaying integers: ");

    for(int i = 0; i < 7; ++i) {
     printf("%d\n", values[i]);
  }
  return 0;
}
```

```
/tmp/SK4OEFtIfX.o
Enter 7 integers: 9
65
45
25
3
48
5
Displaying integers: 9
65
45
25
3
48
5
```

14. Functions

Programiz C Online Compiler

main.c

Run

Output

```c
#include <stdio.h>
int addNumbers(int a, int b);
int main()
{
    int n1,n2,sum;

    printf("Enters 1st numbers: ");
    scanf("%d",&n1);
    printf("Enters 2nd numbers: ");
    scanf("%d",&n2);

    sum = addNumbers(n1, n2);
    printf("sum = %d",sum);

    return 0;
}
int addNumbers(int a, int b)
{
    int result;
    result = a+b;
    return result;
}
```

```
/tmp/SK4OEFtIfX.o
Enters 1st numbers: 25
Enters 2nd numbers: 36
sum = 61
```

15. File

Programiz C Online Compiler

main.c

Run

Output

```c
#include<stdio.h>
main()
{
    FILE *myFile;
    myFile = fopen("d:\\somenumbers.txt", "r");

    //read file into array
    int numberArray[100];
    int i;

    for (i=0; i<10; i++)
    {
        fscanf(myFile, "%d", &numberArray[i]);
    }

    for (i=0; i<10; i++)
    {
        printf("Number is : %d\n", numberArray[i]);
    }
}
```

```
/tmp/qf6SW2nRey.o
Segmentation fault
```