

C program File For Grade 12

1. Write a c program to Print or display Helloworld?

```
#include <stdio.h>
int main()
{
    printf("Hello World");
    return 0;
}
```

Output: Hello World

2. Write a c program to display your name ?

```
#include <stdio.h>
int main()
{
    printf("My name is Rajesh Parajuli");
    return 0;
}
```

Output:

My name is Rajesh Parajuli

3. Write a c program to declare a variable with value and print that variable ?

```
#include <stdio.h>
int main()
{
    int num = 100;
    printf("The value of num is %d .", num);
    return 0;
}
```

Output:

The value of num is 100 .

4. Write a c program to declare a variable and get the value from user input and Print it?

```
#include <stdio.h>
int main()
{
    int num;
```

```
printf("Enter a number: ");
scanf("%d", &num);

printf("You entered: %d", num);
return 0;
}
```

Output:

Enter a number:

10

You entered: 10

5. Write a c program to add two numbers?

```
#include <stdio.h>
int main()
{
    int num1, num2, sum;
    printf("Enter first number: ");
    scanf("%d", &num1);

    printf("Enter second number: ");
    scanf("%d", &num2);

    sum = num1 + num2;
    printf("Sum is %d", sum);

    return 0;
}
```

Output:

Enter first number:

10

Enter second number:

20

Sum is 30

6. Write a c program to add two numbers from users ? Take user input two numbers in one statement?

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

```

int main()
{
    int num1, num2, sum;
    printf("Enter two numbers: ");
    scanf("%d %d", &num1, &num2);
    sum = num1 + num2;
    printf("Sum is %d", sum);
    return 0;
}

```

Output:

Enter two numbers: 15 25
Sum is 40

7. Write a c program to print welcome to grade 12 using function?

```

#include <stdio.h>
void welcome();
void welcome()
{
    printf("Welcome to Grade 12.");
}
int main()
{
    welcome();
    return 0;
}

```

Output:

Welcome to Grade 12.

8. write a c program to add numbers using function with return type with parameters?

```

#include <stdio.h>
int add(int a, int b);
int add(int a, int b)
{
    return a + b;
}
int main()
{
    int num1, num2, sum;
    printf("Enter two numbers: ");
    scanf("%d %d", &num1, &num2);
}

```

```

    sum = add(num1, num2);
    printf("Sum is %d", sum);
    return 0;
}

```

Output:

Enter two numbers: 10 20
Sum is 30

9. Write a c program to add three numbers using function without return type without parameters ?

```

#include <stdio.h>
void add();
void add()
{
    int num1, num2, num3, sum;
    printf("Enter three numbers: ");
    scanf("%d %d %d", &num1, &num2, &num3);
    sum = num1 + num2 + num3;
    printf("Sum = %d", sum);
}
int main()
{
    add();
    return 0;
}

```

Output:

Enter three numbers:
10 20 30
Sum = 60

10. Write a c program to perform addition, subtract, multiply, division remainder using function with return type with parameters?

```

#include <stdio.h>
int add(int a, int b);
int sub(int a, int b);
int mul(int a, int b);
int divi(int a, int b);
int rem(int a, int b);

```

```
int add(int a, int b)
{
    return a + b;
}

int sub(int a, int b)
{
    return a - b;
}

int mul(int a, int b)
{
    return a * b;
}

int divi(int a, int b)
{
    return a / b;
}

int rem(int a, int b)
{
    return a % b;
}

int main()
{
    int num1, num2;
    printf("Enter two numbers: ");
    scanf("%d %d", &num1, &num2);

    printf("Addition = %d", add(num1, num2));
    printf("\n Subtraction = %d", sub(num1, num2));
    printf("\n Multiplication = %d", mul(num1, num2));
    printf("\n Division = %d", divi(num1, num2));
    printf("\n Remainder = %d", rem(num1, num2));

    return 0;
}
```

Output:

Enter two numbers: 20 6

Addition = 26

Subtraction = 14

Multiplication = 120

Division = 3

Remainder = 2

11. write a c program to implement pointer ?

```
#include <stdio.h>
int main()
{
    int num = 10;
    int *ptr=&num;
    printf("Value of num = %d\n", num);
    printf("Value pointed by pointer = %d\n", *ptr);

    printf("Address of num = %p\n", &num);
    printf("Value stored in pointer = %p\n", ptr);

    return 0;
}
```

Output:

Value of num = 10

Value pointed by pointer = 10

Address of num = 0x61ff08

Value stored in pointer = 0x61ff08

12. write a c program to add two numbers using pointer ?

```
#include <stdio.h>
int main()
{
    int num1, num2, sum;
    printf("Enter two numbers: ");
    scanf("%d %d", &num1, &num2);
    int *ptr1=&num1;
    int *ptr2=&num2
    sum = *ptr1 + *ptr2;
    printf("Sum is %d", sum);
    return 0;
}
```

Output:

Enter two numbers: 15 25

Sum is 40

13. Write a c program to swap two numbers using pointer ?

```
#include <stdio.h>
void swap(int *a, int *b) { int temp;
temp = *a;
*a = *b;
*b = temp;
printf("\nAfter swapping: %d %d", *a, *b);
}
int main() { int num1, num2;
printf("Enter two numbers: ");
scanf("%d %d", &num1, &num2);
printf("Before swapping: %d %d", num1, num2);
swap(&num1, &num2);
return 0;
}
```

Output:

Enter two numbers: 10 20

Before swapping: 10 20

After swapping: 20 10

14. Write a C program to implement arithmetic pointer easy program?

```
#include <stdio.h>
int main()
{
    int num = 10;
    int *ptr = &num;

    printf("Original Address = %p\n", ptr);
    ptr++;
    printf("After ptr++ = %p\n", ptr);
    ptr--;
    printf("After ptr-- = %p\n", ptr);
    return 0;
}
```

Output:

Original Address = 0x61ff08

After ptr++ = 0x61ff0c

After ptr-- = 0x61ff08

14. Write a c program to implement an array?

```
#include <stdio.h>
int main()
{
    int arr[5] = {10, 20, 30, 40, 50};
    printf("Array elements are:\n");
    for(int i = 0; i < 5; i++)
    {
        printf("%d\n", arr[i]);
    }
    return 0;
}
```

Output:

Array elements are:

10

20

30

40

50

16. write a c program to add two matrices 2*2?

```
#include <stdio.h>
int main()
{
    int a[2][2], b[2][2], sum[2][2];
    int i, j;

    printf("Enter elements of first matrix:\n");
    for(i = 0; i < 2; i++)
    {
        for(j = 0; j < 2; j++)
        {
            scanf("%d", &a[i][j]);
        }
    }
}
```



```

printf("Enter elements of second matrix:\n");
for(i = 0; i < 2; i++)
{
    for(j = 0; j < 2; j++)
    {
        scanf("%d", &b[i][j]);
    }
}
for(i = 0; i < 2; i++)
{
    for(j = 0; j < 2; j++)
    {
        sum[i][j] = a[i][j] + b[i][j];
    }
}
printf("Sum of the matrices:\n");
for(i = 0; i < 2; i++)
{
    for(j = 0; j < 2; j++)
    {
        printf("%d ", sum[i][j]);
    }
    printf("\n");
}
return 0;
}

```

Output:

Enter elements of first matrix:

1 2

3 4

Enter elements of second matrix:

5 6

7 8

Sum of the matrices:

6 8

10 12

17. Write a c program to multiply two matrices 2*3?

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

```
int main()
{
    int a[2][3], b[3][2], mul[2][2], sum;
    int i, j, k;

    printf("Enter elements of first matrix:\n");
    for(i = 0; i < 2; i++)
    {
        for(j = 0; j < 3; j++)
        {
            scanf("%d", &a[i][j]);
        }
    }

    printf("Enter elements of second matrix:\n");
    for(i = 0; i < 3; i++)
    {
        for(j = 0; j < 2; j++)
        {
            scanf("%d", &b[i][j]);
        }
    }

    // Matrix multiplication
    for(i = 0; i < 2; i++)
    {
        for(j = 0; j < 2; j++)
        {
            sum = 0;

            for(k = 0; k < 3; k++)
            {
                sum = sum + a[i][k] * b[k][j];
            }

            mul[i][j] = sum;
        }
    }
}
```

```
}

printf("\nResultant Matrix:\n");
for(i = 0; i < 2; i++)
{
    for(j = 0; j < 2; j++)
    {
        printf("%d ", mul[i][j]);
    }
    printf("\n");
}

return 0;
}
```

Output:

Enter elements of first matrix:

1 2 3

4 5 6

Enter elements of second matrix:

1 2

3 4

5 6

Matrix multiplication:

Resultant Matrix:

22 28

49 64