

Practical:-1

Aim :- Wap to find ASCII value of a character.

Input :-

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

```
int main()
{
    char A;
    printf("Enter a character :");
    scanf("%c",&A);
    printf("ASCII value of %c =%d ",A,A);
    return 0;
}
```

Output :-

```
cd "/Users/adityachauhan/Desktop/c/" && gcc ascii.c -o ascii && "/Users/adityachauhan/Desktop/c/"ascii
```

The default interactive shell is now zsh.

To update your account to use zsh, please run `chsh -s /bin/zsh`.

For more details, please visit <https://support.apple.com/kb/HT208050>.

```
Adityas-Air:c adityachauhan$ cd "/Users/adityachauhan/Desktop/c/" && gcc ascii.c -o ascii && "/Users/adityachauhan/Desktop/c/"ascii
```

```
Enter a character :G
```

```
ASCII value of G =71 Adityas-Air:c adityachauhan$ █
```

Practical:-2

Aim :- Wap to swap two numbers without using third variable.

Input :-

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

```
int main()
{
    int a,b;
    printf("enter the value of a: ");
    scanf("%d",&a);
    printf("enter the value of b: ");
    scanf("%d",&b);
    printf("BEfore swap a=%d b=%d",a,b);
    a=a*b;
    b=a/b;
    a=a/b;
    printf("\nAfter swap a=%d b=%d\n",a,b);
    return 0;
}
```

Output :-

```
Adityas-Air: c adityachauhan$ cd "/Users/adityachauhan/Desktop/c/" && gcc swaptwonumberwithout
berwithout.c && "/Users/adityachauhan/Desktop/c/"swaptwonumberwithout
enter the value of a: 45
enter the value of b: 89
BEfore swap a=45 b=89
After swap a=89 b=45
Adityas-Air: c adityachauhan$
```

Practical:-3

Aim :-Wap to find roots of a quadratic equation.

Input :-

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

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

```
int main() {
    double a, b, c, discriminant, root1, root2, realPart, imagPart;
    printf("Enter coefficients a, b and c: ");
    scanf("%lf %lf %lf", &a, &b, &c);

    discriminant = b * b - 4 * a * c;
    if (discriminant > 0) {
        root1 = (-b + sqrt(discriminant)) / (2 * a);
        root2 = (-b - sqrt(discriminant)) / (2 * a);
        printf("root1 = %.2lf and root2 = %.2lf", root1, root2);
    }
    else if (discriminant == 0) {
        root1 = root2 = -b / (2 * a);
        printf("root1 = root2 = %.2lf;", root1);
    }
    else {
        realPart = -b / (2 * a);
        imagPart = sqrt(-discriminant) / (2 * a);
        printf("root1 = %.2lf+%.2lfi and root2 = %.2f-%.2fi", realPart, imagPart, realPart,
imagPart);
    }
    return 0;
}
```

Output :-

```
Adityas-Air:c adityachauhan$ cd "/Users/adityachauhan/Desktop/c/" && gcc findtherootsofaquadratic.c -o findth
erootsofaquadratic && "/Users/adityachauhan/Desktop/c/"findtherootsofaquadratic
Enter coefficients a, b and c: 3
5
7
root1 = -0.83+1.28i and root2 = -0.83-1.28iAdityas-Air:c adityachauhan$
```

Practical:-4

Aim :-Wap to find Factorial of a number.

Input :-

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

```
long double number(int n);
```

```
int main ()
```

```
{
```

```
    int n;
```

```
    printf("enter the integer:");
```

```
    scanf("%d",&n);
```

```
    printf("Factorial of %d = %Lf",n,number(n));
```

```
    return 0;
```

```
}
```

```
long double number(int n)
```

```
{
```

```
    if (n>=1)
```

```
    {
```

```
        return n*number(n-1);
```

```
    }
```

```
    else
```

```
    {
```

```
        return 1;
```

```
    }
```

```
}
```

Output :-

```
adityachauhan@adityachauhan:~/Desktop$ cd /Users/adityachauhan/Desktop/ && gcc factorial.c -o factorial && ./factorial
adityachauhan/Desktop/c/"factorial
enter the integer:99
Factorial of 99 = 9332621544394415263805027701199605403627550100931459605226819830413159704593911231537610900
94727842009119716007250976491487232907525436431040857220210229248.000000Adityas-Air:c adityachauhan$
```

Practical:-5

Aim :-Wap to generate multiplication table.

Input :-

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

```
void tables(int);
```

```
int main()
```

```
{  
    int num;
```

```
    printf("Enter a positive number\n");  
    scanf("%d", &num);
```

```
    printf("\nMultiplication Table for %d is:\n", num);
```

```
    tables(num);
```

```
    return 0;
```

```
}
```

```
void tables(int num)
```

```
{  
    int count;
```

```
    for(count = 1; count <= 10; count++)
```

```
    {  
        printf("%d x %d = %d\n", num, count, num*count);  
    }
```

```
}
```

Output :-

```
Enter a positive number  
15  
  
Multiplication Table for 15 is:  
15 x 1 = 15  
15 x 2 = 30  
15 x 3 = 45  
15 x 4 = 60  
15 x 5 = 75  
15 x 6 = 90  
15 x 7 = 105  
15 x 8 = 120  
15 x 9 = 135  
15 x 10 = 150  
Adityas-Air:c adityachauhan$
```

Practical:-6

Aim :-Wap to find GCD and LCM of two numbers.

Input :-

```
#include<stdio.h>
int main()
{
    int num1, num2, i, gcd, lcm;

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

    for(i=1; i<=num1 && i<=num2; i++)
    {
        if(num1%i==0 && num2%i==0)
            gcd=i;
    }

    lcm=(num1*num2)/gcd;

    printf("GCD = %d\n",gcd);
    printf("LCM = %d\n",lcm);

    return 0;
}
```

Output :-

```
adityachauhan/Desktop/c/"gcdandlcm
Enter two numbers: 50
60
GCD = 10
LCM = 300
Adityas-Air:c adityachauhan$
```

Practical:-7

Aim :-Wap to reverse a number.

Input :-

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

```
int main() {
```

```
    int n, rev = 0, c;
```

```
    printf("Enter an integer: ");
```

```
    scanf("%d", &n);
```

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

```
        c = n % 10;
```

```
        rev = rev * 10 + c;
```

```
        n /= 10;
```

```
    }
```

```
    printf("Reversed number = %d", rev);
```

```
    return 0;
```

```
}
```

Output :-

```
Adityas-Air:c adityachauhan$ cd ~/Users/adityachauhan/Desktop/c/ && gcc reverse.c -o reverse && ~/Users/adit
yachauhan/Desktop/c/"reverse
Enter an integer: 45
Reversed number = 54Adityas-Air:c adityachauhan$
```

Practical:-8

Aim :-Wap to check whether a number is palindrome or not.

Input :-

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

```
int main() {  
    int n, reversedN = 0, remainder, originalN;  
    printf("Enter an integer: ");  
    scanf("%d", &n);  
    originalN = n;  
    while (n != 0) {  
        remainder = n % 10;  
        reversedN = reversedN * 10 + remainder;  
        n /= 10;  
    }  
    if (originalN == reversedN)  
        printf("%d is a palindrome.", originalN);  
    else  
        printf("%d is not a palindrome.", originalN);  
  
    return 0;  
}
```

Output :-

```
auhan/Desktop/c/"palam  
Enter an integer: 1010  
1010 is not a palindrome.Adityas-Air:c adityachauhan$ cd "/Users/adityachauhan/Desktop/c/" && gcc palam.c -o  
auhan/Desktop/c/"palamacha  
Enter an integer: 1001  
1001 is a palindrome.Adityas-Air:c adityachauhan$
```


Practical:-9

Aim :-Wap to calculator using switch case

Input :-

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

```
int main() {
    char operator;
    double first, second;
    printf("Enter an operator (+, -, *, /): ");
    scanf("%c", &operator);
    printf("Enter two operands: ");
    scanf("%lf %lf", &first, &second);
    switch (operator) {
    case '+':
        printf("%.1lf + %.1lf = %.1lf", first, second, first + second);
        break;
    case '-':
        printf("%.1lf - %.1lf = %.1lf", first, second, first - second);
        break;
    case '*':
        printf("%.1lf * %.1lf = %.1lf", first, second, first * second);
        break;
    case '/':
        printf("%.1lf / %.1lf = %.1lf", first, second, first / second);
        break;
    default:
        printf("Error! operator is not correct");
    }
    return 0;
}
```

Output :-

```
For more details, please visit https://support.apple.com/kb/HT200050.
Adityas-Air:c adityachauhan$ cd "/Users/adityachauhan/Desktop/c/" && gcc cal.c -o cal && "/Users/adityachauhan/Desktop/c/"cal
Enter an operator (+, -, *, /): +
Enter two operands: 24
45
24.0 + 45.0 = 69.0Adityas-Air:c adityachauhan$
```