

Assignment 01:-

Write a program that converts a lowercase to uppercase and an uppercase character to lowercase. If the input character is not a letter, print "Invalid Input".

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

```
void main()
```

```
{
```

```
    char c;
```

```
    printf("Enter a character: ");
```

```
    scanf("%c", &c);
```

```
    if (c >= 'a' && c <= 'z')
```

```
    {
```

```
        c -= 32;
```

```
    }
```

```
    else if (c >= 'A' && c <= 'Z')
```

```
    {
```

```
        c += 32;
```

```
    }
```

```
    else
```

```
    {
```

```
        printf("Invalid Input");
```

```
        return 0;
```

```
    }
```

```
    printf("Converted character: %c", c);
```

```
    return 0;
```

```
}
```

Output:-

Enter a character: a

Converted character: A

Enter a character: b

Converted character: B

Enter a character: !

Invalid Input.

Assignment 02:-

You have to print the character 'ch' on the first line and then print 's' on the next line. In the last line print the sentence Ben.

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

```
int main()
```

```
{
```

```
    char ch;
```

```
    printf("Enter a character:");
```

```
    scanf("%c", &ch);
```

```
    printf("%c\n", 's');
```

```
    printf("Ben\n");
```

```
    return 0;
```

```
}
```

Output:-

```
Enter a character: x
```

```
s
```

```
Ben.
```

Assignment 03:-

Give a +ve Integer denoting n, do the following

- If $1 \leq n \leq 9$, print the (lowercase) English word corresponding to the number.
- If $n > 9$, print greater than 9.

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

```
int main()
```

```
{
```

```
    int n;
```

```
    printf("Enter a +ve Integer:");
```

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

```
    if (n >= 1 && n <= 9)
```

```
{
```

```
        switch (n)
```

```
{
```

```
            case 1: printf("one\n");
```

```
                break;
```

```
            case 2: printf("two\n");
```

```
                break;
```



```
case 3: printf("three\n");
break;
```

```
case 4: printf("four\n");
break;
```

```
case 5: printf("five\n");
break;
```

```
case 6: printf("six\n");
break;
```

```
case 7: printf("seven\n");
break;
```

```
case 8: printf("eight\n");
break;
```

```
case 9: printf("nine\n");
break;
```

```
}
else {
    printf("Greater than 9\n");
}
```

```
return 0;
```

Output:-

Enter a positive integer: 5
five

Enter a positive integer: 20

Greater than 9.

Assignment 05:-

Condition:- $18 \leq \text{age} \leq 60$.

$0 \leq \text{monthly-income} \leq 50000$

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

```
int main()
```

```
{
```

```
    int age;
```

```
    float monthly-income;
```

```

printf ("Enter age (18-60):");
scanf ("%d", &age);

printf ("Enter monthly-income (0-50000):");
scanf ("%f", &monthly-income);

if (age < 18 || age > 60 || monthly-income < 0 || monthly-income > 50000)
{
    printf ("Invalid Input, Please check the age and income range");
}
else if (age >= 18 && age <= 25 && monthly-income > 25000)
{
    printf ("Loan eligible");
}
else if (age >= 26 && age <= 40 && monthly-income >= 10000)
{
    printf ("Loan eligible");
}
else
{
    printf ("Loan not eligible");
}

return 0;
}

```

Output :-

```

Enter age (18-60): 30
Enter monthly income (0-50000): 12000
Loan eligible.

```


Assignment 106:-

Grade Evaluation System

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

```
int main()
```

```
{
```

```
    int score;
```

```
    printf ("Enter score (0-100):");
```

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

```
    if (score < 0 || score > 100)
```

```
    {  
        printf ("Invalid score. Please enter between 0 and 100.");  
    }
```

```
    else if (score >= 90)
```

```
    {  
        printf ("Grade : A");  
    }
```

```
    else if (score >= 80)
```

```
    {  
        printf ("Grade : B");  
    }
```

```
    else if (score >= 70)
```

```
    {  
        printf ("Grade : C");  
    }
```

```
    else if (score >= 60)
```

```
    {  
        printf ("Grade : D");  
    }
```

```
    else if (score >= 50)
```

```
    {  
        printf ("Grade : E");  
    }
```

```
    else if (score >= 40)
```

```
    {  
        printf ("Grade : F");  
    }
```

```
    else if (score >= 30)
```

```
    {  
        printf ("Grade : G");  
    }
```

```
    return 0;
```

Output:-

Enter score (0-100): 35

Grade : A.

Enter score (0-100): 59

Grade : D

Assignment 04:- For each Integer n in Interval $[a, b]$.

- If $1 \leq n \leq 9$ print english representation of n in lowercase
- $n > 9$ even n_2 print even.
- $n > 9$ odd n_2 print odd.

#include <stdio.h>

void print-representation (int a, int b)

{ for (int n = a; n <= b; n++)

{ if (n >= 1 && n <= 9)

{ switch (n)

{ case 1: printf ("one\n"); break;

case 2: printf ("two\n"); break;

case 3: printf ("three\n"); break;

case 4: printf ("four\n"); break;

case 5: printf ("five\n"); break;

case 6: printf ("six\n"); break;

case 7: printf ("seven\n"); break;

case 8: printf ("eight\n"); break;

case 9: printf ("nine\n"); break;

} else {

if (n % 2 == 0)

{ printf ("even\n");

}

else {

printf ("odd\n");

}


```
int main()
```

```
{
```

```
    int a, b;
```

```
    printf("Enter lower bound (a):");
```

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

```
    printf("Enter upper bound (b):");
```

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

```
    print_representation(a, b);
```

```
    return 0;
```

```
}
```

Output:

Enter lower bound (a): 8

Enter upper bound (b): eight

nine.

even
odd.

Assignment 08:- print powers of 2 from 2 to 128 on separate lines using a while loop.

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

```
void main()
```

```
{
```

```
    int i = 1;
```

```
    while (i <= 128)
```

```
    {
```

```
        printf("%d\n", i * 2);
```

```
        i * 2;
```

```
    }
```

```
    return 0;
```

```
}
```

output:

2

4

8

16

32

64

128.

Assignment 09:- Give 5 digit integer print sum of its digit (condition $\rightarrow 10000 \leq n \leq 99999$)

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

```
void main()
```

```
{
```

```
    int n;
```

```
    printf("Enter a 5 digit integer (10000-99999):");
```

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

```
    if (n < 10000 || n > 99999)
```

```
    {
```

```
        printf("Invalid input. Please enter a 5-digit integer.");
```

```
    }
```

```

int sum = 0;
while (n != 0)
{

```

```

    sum += n % 10;
    n /= 10;
}

```

```

printf("Sum of digits: %d\n", sum);
return 0;
}

```

Output:-

Enter a 5-digit Integer (100000-99999): 10564

Sum of digits: 16

Enter a 5-digit Integer (100000-99999): 12345

Sum of digits: 15

Assignment 10: Chef wants to write a code ~~with~~ with
check if given number is prime.

```

#include <stdio.h>
int main()
{
    int num;
    printf("Enter a number:");
    scanf("%d", &num);
    if (num <= 1)
    {
        printf("No\n");
        return 0;
    }
}

```

```

int i = 2;
int is_prime = 1;
while (i * i <= num)
{
    if (num % i == 0)
    {
        is_prime = 0;
        break;
    }
    i++;
}

```

```

if (is_prime)
{
    printf("Yes\n");
}
else
{
    printf("No\n");
}

```

```

return 0;
}

```

Output:-

Enter a number: 7

Yes

Enter a number: 10

No