Write a C program to find power of a number using for loop.

```c
1  #include <stdio.h>
2
3  int main()
4  {
5      int num, exponent;
6      long long power = 1;
7      int i;
8      printf("Enter number: ");
9      scanf("%d", &num);
10     printf("Enter exponent: ");
11     scanf("%d", &exponent);
12     for(i=1; i<=exponent; i++)
13     {
14         power = power * num;
15     }
16     printf("%d ^ %d = %lld", num, exponent, power);
17 }
```

input

```
Enter number: 3
Enter exponent: 4
3 ^ 4 = 81

...Program finished with exit code 0
Press ENTER to exit console.
```

Write a C program to find all factors of a number.

```c
1  #include <stdio.h>
2  int main()
3  {
4      int num, i;
5      printf("Enter any positive number: ");
6      scanf("%d", &num);
7      printf("Factors of %d are: ", num);
8      for (i = 1; i <= num; ++i)
9      {
10         if (num % i == 0)
11         {
12             printf("\n%d\n", i);
13         }
14     }
15 }
```

input

```
Enter any positive number: 34
Factors of 34 are:
1

2

17

34


...Program finished with exit code 0
Press ENTER to exit console.
```

Write a C program to find HCF (GCD) of two numbers.

```c
1  #include <stdio.h>
2
3  int main()
4  {
5      int n1, n2, i, hcf;
6      printf("Enter two integers:");
7      scanf("%d %d", &n1, &n2);
8      for(i=1; i <= n1 && i <= n2; ++i)
9      {
10         if(n1%i==0 && n2%i==0)
11             hcf = i;
12     }
13     printf("HCF of %d and %d is: %d", n1, n2, hcf);
14 }
```

input

```
Enter two integers:42 12
HCF of 42 and 12 is: 6

...Program finished with exit code 0
Press ENTER to exit console.
```

Write a C program to find LCM of two numbers.

```c
1  #include <stdio.h>
2
3  int hcf(int num1, int num2)
4  {
5      if (num1 == 0)
6          return num2;
7      return hcf(num2 % num1, num1);
8  }
9
10 int main()
11 {
12     int num1, num2, lcm;
13     printf("Enter two numbers: ");
14     scanf("%d %d", &num1, &num2);
15
16     lcm =  num1 * num2 / hcf(num1, num2);
17     printf("LCM of %d and %d is %d.",num1, num2, lcm);
18
19 }
```

input

```
Enter two numbers: 12 56
LCM of 12 and 56 is 168.

...Program finished with exit code 0
Press ENTER to exit console.
```

Write a C program to find all prime factors of a number.

```c
1   #include <stdio.h>
2
3   int main()
4   {
5       int i, j, num, isPrime;
6       printf("Enter any number to print its prime factors:");
7       scanf("%d", &num);
8       printf("Prime factors of %d are:\n", num);
9       for(i=2; i<=num; i++)
10      {
11          if(num%i==0)
12          {
13              isPrime = 1;
14              for(j=2; j<=i/2; j++)
15              {
16                  if(i%j==0)
17                  {
18                      isPrime = 0;
19                      break;
20                  }
21              }
22              if(isPrime==1)
23              {
24                  printf("%d, ", i);
25              }
26          }
27      }
28  }
```

```
input
```

```
Enter any number to print its prime factors:3344
Prime factors of 3344 are:
2, 11, 19,

...Program finished with exit code 0
Press ENTER to exit console.
```

5

Write a C program to check whether a number is Strong number or not.

```c
1  #include<stdio.h>
2  int main()
3  {
4      int n,i;
5      int fact,rem;
6      printf("Enter a number:");
7      scanf("%d",&n);
8      int sum = 0;
9      int temp = n;
10     while(n)
11     {
12         i = 1,fact = 1;
13         rem = n % 10;
14         while(i <= rem)
15         {
16             fact = fact * i;
17             i++;
18         }
19         sum = sum + fact;
20         n = n / 10;
21     }
22     if(sum == temp)
23     printf("%d is a strong number!",temp);
24     else
25     printf("%d is not a strong number!",temp);
26  }
```

input

```
Enter a number:145
145 is a strong number!

...Program finished with exit code 0
Press ENTER to exit console.
```

Write a C program to print all Strong numbers between 1 to n.

```c
1  #include <stdio.h>
2
3  int main()
4  {
5      int i, j, current, lastDigit, end;
6      long long fact, sum;
7      printf("Enter upper limit:");
8      scanf("%d", &end);
9      printf("All strong numbers between 1 to %d are:\n", end);
10     for(i=1; i<=end; i++)
11     {
12         current = i;
13         sum = 0;
14         while(current > 0)
15         {
16             fact = 1ll;
17             lastDigit = current % 10;
18             for( j=1; j<=lastDigit; j++)
19             {
20                 fact = fact * j;
21             }
22             sum += fact;
23             current /= 10;
24         }
25         if(sum == i)
26         {
27             printf("%d, ", i);
28         }
29     }
30  }
```

input

```
Enter upper limit:1000
All strong numbers between 1 to 1000 are:
1, 2, 145,

...Program finished with exit code 0
Press ENTER to exit console.
```

Write a C program to convert Hexadecimal to Decimal number system.

```c
1  #include <stdio.h>
2  #include <math.h>
3  #include <string.h>
4
5  int main()
6  {
7      long long decimalNumber=0;
8      char hexDigits[16] = {'0', '1', '2', '3', '4', '5', '6', '7', '8','9', 'A', 'B', 'C', 'D', 'E', 'F'};
9      char hexadecimal[30];
10     int i, j, power=0, digit;
11     printf("Enter a Hexadecimal Number:");
12     scanf("%s", hexadecimal);
13     for(i=strlen(hexadecimal)-1; i >= 0; i--)
14     {
15         for(j=0; j<16; j++)
16         {
17             if(hexadecimal[i] == hexDigits[j])
18             {
19                 decimalNumber += j*pow(16, power);
20             }
21         }
22         power++;
23     }
24     printf("Decimal Number: %lld", decimalNumber);
25 }
```

input

```
Enter a Hexadecimal Number:8CD
Decimal Number: 2253

...Program finished with exit code 0
Press ENTER to exit console.
```

Write a C program to input week number and print weekday.

```c
#include <stdio.h>
int main()
{
    int week;
    printf("Enter week number (1-7): ");
    scanf("%d", &week);
    if(week == 1){
        printf("Monday");
    }
    else if(week == 2){
        printf("Tuesday");
    }
    else if(week == 3){
        printf("Wednesday");
    }
    else if(week == 4){
        printf("Thursday");
    }
    else if(week == 5){
        printf("Friday");
    }
    else if(week == 6){
        printf("Saturday");
    }
    else if(week == 7){
        printf("Sunday");
    }
    else{
        printf("Invalid Input! Please enter week number between 1-7.");
    }
}
```

input

```
Enter week number (1-7): 3
Wednesday

...Program finished with exit code 0
Press ENTER to exit console.
```

Write a C program to input marks of five subjects Physics, Chemistry, Biology, Mathematics and Computer. Calculate percentage and grades accordingly.

```c
1  #include <stdio.h>
2
3  int main()
4  {
5      int phy, chem, bio, math, comp;
6      float per;
7      printf("Enter five subjects marks (out of 100): ");
8      scanf("%d%d%d%d%d", &phy, &chem, &bio, &math, &comp);
9      per = (phy + chem + bio + math + comp) / 5.0;
10     printf("Percentage = %.2f\n", per);
11     if(per >= 90){
12         printf("Grade A");
13     }
14     else if(per >= 80){
15         printf("Grade B");
16     }
17     else if(per >= 70){
18         printf("Grade C");
19     }
20     else if(per >= 60){
21         printf("Grade D");
22     }
23     else if(per >= 40){
24         printf("Grade E");
25     }
26     else{
27         printf("Grade F");
28     }
29 }
```

input

```
Enter five subjects marks (out of 100): 98 99 96 97 98
Percentage = 97.60
Grade A

...Program finished with exit code 0
Press ENTER to exit console.
```