1. Write C program to solve the following problems by using loop-
   (i) Print "Southeast University" for 100 times.
   (ii) Print all numbers from 1 to 100.
   (iii) Print all even numbers from 1 to 100.
   (iv) Print all odd numbers from 1 to 100.
2. Find out the sum of each of the following series. n is the input from user for series (iv) to (vi)
   (i) 1+2+3+…….+100
   (ii) 3 + 11 + 19 + … + 1691.
   (iii) 7 + 20 + 33 + … (up to 100 th term)
   (iv) 5 – 11 + 17 - … (up to 75 th term)
   (v) 1 + (1 + 2) + (1 + 2 + 3) + … + (1 + 2 + 3 + … + n)
   (vi) $1 + \frac{2^2}{2!} + \frac{3^2}{3!} + \ldots + \frac{n^2}{n!}$
   (vii) 2 * 7 * 12 * … * 37
3. x and n are input through keyboard. Write a program to compute x^n , n! , ${}^nC_r$, ${}^nP_r$
4. Write a program to determine all prime numbers within the range [a …b] where a & b are input through keyboard.
5. Construct the following table. Here n is input from the user.

1	2	3	…	n
2	4	6	…	2n
3	6	9	…	3n
.	.	.	…	.
.	.	.	…	.
.	.	.	…	.
n	2n	3n	…	nn

6. Write a program to find out first n perfect number where n is the input from user.
7. Write a program to find first n Fibonacci number where n is the input from user.
8. Write a program to show the following triangle/rectangle of '*'s or numbers. Take n as input from user to determine the number of rows of the structure. (eg: n = 5)

```
        *
      * * *
    * * * * *
  * * * * * * *
* * * * * * * * *

        *
      *   *
    *       *
  *           *
* * * * * * * * *
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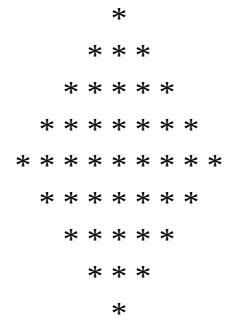

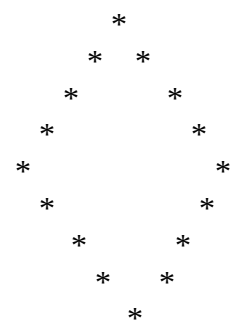

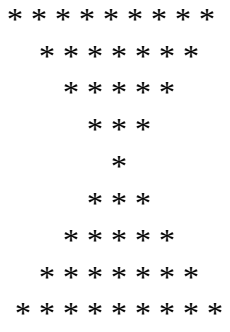

9. Write a program to print out all Armstrong numbers between 1 and 10000. If sum of cubes of each digit of the number is equal to the number itself, then the number is called an Armstrong number. For example, 153 = (1*1*1) + (5*5*5) + (3*3*3).