

Q1

Users are required to enter an integer variable 'a' using the keyboard (STDIN).

Please check the following conditions:

- If a is odd then print: "a is odd"
- Else print: "a is not odd"

Below is an example how the program will run:

Enter the values 3 or 4 for 'a'

3	4
OUTPUT: a is odd	OUTPUT: a is not odd

Q2

Users are required to enter a non-negative integer variables n using the keyboard (STDIN). The system displays the sum of all even numbers that smaller or equal n

Below is an example how the program will run:

Enter the value 6 for 'n':

6
OUTPUT: 12

Q3

Users are required to enter six integer numbers using the keyboard (STDIN).

The program needs to find the maximum even number among the entered values. The program then displays this number on screen.

Below is an example how the program will run:

6 5 12 3 10 4
OUTPUT: 12

Q4

Users are required to enter an integer number to define rows* of the half Pyramid pattern (row > 0).

Program prints out the half Pyramid of number.

Below is an example how the program will run:

Enter 5 for 'row.'

```
5
```

```
OUTPUT:
```

```
1
```

```
1 2
```

```
1 2 3
```

```
1 2 3 4
```

```
1 2 3 4 5
```

Q5

Your program allows the user to enter an integer array of 'n' elements.

The system finds the first pair with a given sum in the collection, A newline character '\n' between any two printed values..

Below is an example how the program will run:

when 'n' = 6; array = {6, 5, 5, -3, 13, 8}; sum = 10

```
6
```

```
6 5 5 -3 13 8
```

```
10
```

```
OUTPUT:
```

```
5
```

```
5
```

Q6

Your program allows users to enter a string: 'o' with maximum length of 100 characters. The system finds the number of words starting with letter 's' and ending with letter 'g' in 'o'. Finally, the system prints out that number.

Below is an example how the program will run:

o=studying programming and swimming

studying programming and swimming

OUTPUT:

2

Q7

Your program allows users to enter a string: 's' with maximum length of 100 characters. The system finds characters in the alphabet at the position with an odd index to convert to uppercase characters.

Below is an example how the program will run:

s=prf3pro

prf3pro

OUTPUT:

pRf3pRo

Q8

Your program should allow users to find the two-digit number(s) that appear(s) the most in the array of 7 integers. Then your program should print out the found two-digit numbers.

Below is an example how the program will run:

1 3 5 15 15 3 5 OUTPUT: 15	1 3 5 7 8 6 8 OUTPUT: no two-digit number	1 11 5 15 15 3 11 OUTPUT: 11 15
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Q9

The program allows the user to enter the values of the elements of the square matrix as integers with the same number of rows and columns and input from the keyboard.

Print the sum of the elements on the main diagonal of the matrix.

Below is an example how the program will run:

```
rows=3;
```

```
array =
```

```
{ 3   2   5  
  9   6   8  
  7   4   1}
```

```
3  
3   2   5  
9   6   8  
7   4   1
```

OUTPUT:

10

Q10

Your program should allow users to enter an integer number 'n', then it should display the product of all the digits forming 'n'.

Below is an example how the program will run:

enter n=31546

```
31546
```

OUTPUT:

360