# مکتب شریف

اولین بوتکمپ آموزشی - استخدامی ایران

| تمرین گروهی (CW2) | مکتب شریف |
|---|---|
| پنج شنبه | - جاوا |

**Q1.** get a number from the user and check if it's a sunny number or not.

A number is called a sunny number if the number next to the given number is a perfect square. In other words, a number N will be a sunny number if N+1 is a perfect square.

Sample code output:

```
Enter a number to check: 32
The given number is not a sunny number.
```

```
Enter a number to check: 80
The given number is a sunny number.
```
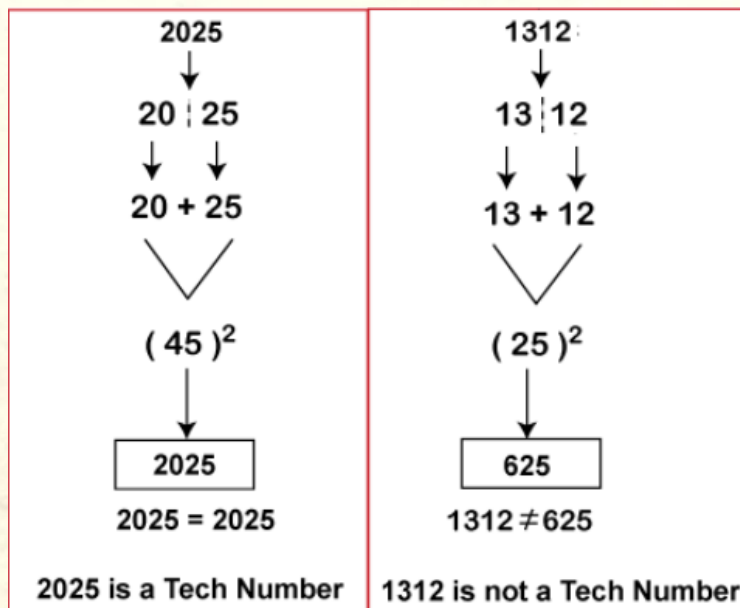
**Q2.** Please write a Java program to find the duplicate words in a string

Sample code output:

```
Enter your String:you are students in maktab sharif, maktab students
Duplicate words in a given string :
students
maktab
```

**Q3.** get a number from the user and check if it's a **tech number** or not.

A number is called a **tech number** if the given number has an even number of digits and the number can be divided exactly into two parts from the middle. After equally dividing the number, sum up the numbers and find the square of the sum. If we get the number itself as square, the given number is a tech number, else, not a tech number. For example, 3025 is a tech number.
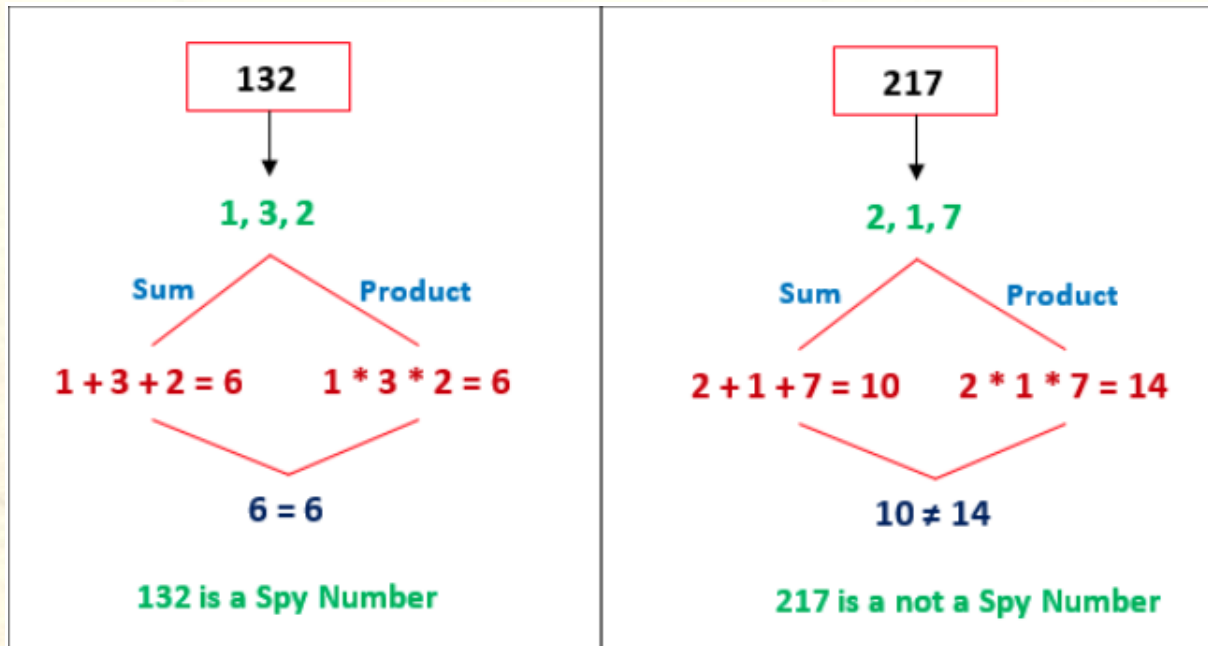


Sample code output:

```
Enter a number to check: 2025
2025 is a tech number.
```

```
Enter a number to check: 9181
9181 is not a tech number.
```

**Q4.** get a number from the user and check if it's a **Spy number** or not.

A positive integer is called a spy number if the **sum** and **product** of its digits are equal. In other words, a number whose sum and product of all digits are equal is called a **spy number**.



Sample code output:

```
Enter the number to check: 123
The given number is a spy number.
```

```
Enter the number to check: 456
The given number is not a spy number.
```

**Q5.** Write a simple ATM console app.

In the ATM program, the user has to select an option from the options displayed on the screen. The options are related to withdraw the money, deposit the money, check the balance, and exit.

To withdraw the money, we simply get the withdrawal amount from the user and remove that amount from the total balance and print the successful message.

To deposit the money, we simply get the deposit amount from the user, add it to the total balance and print the successful message.

To check balance, we simply print the total balance of the user.

We use the exit(0) method to exit from the current Transaction mode and return the user to the home page or initial screen.

Sample code output:

```
***Maktab ATM Machine***
Choose 1 for Withdraw
Choose 2 for Deposit
Choose 3 for Check Balance
Choose 4 for EXIT
Choose the operation:3
Balance : 100000

***Maktab ATM Machine***
Choose 1 for Withdraw
Choose 2 for Deposit
Choose 3 for Check Balance
Choose 4 for EXIT
Choose the operation:2
Enter money to be deposited:11111
Your Money has been successfully depsited
now you have 111111
```

**Q6.** https://quera.org/problemset/655/

**Q7.** https://quera.org/problemset/654/

**Q8.** https://quera.org/problemset/102254/