

Write a Java program to create a method that takes a string as input and throws an exception if the string does not contain vowels.

Sample Solution:

Java Code:

```
public class Vowel_Check {
    public static void main(String[] args) {
        try {
            String text = "Java handling and managing exceptions ";
            // String text = "Typy gyps fly.";
            System.out.println("Original string: " + text);
            checkVowels(text);
            System.out.println("String contains vowels.");
        } catch (NoVowelsException e) {
            System.out.println("Error: " + e.getMessage());
        }
    }

    public static void checkVowels(String text) throws NoVowelsException {
        boolean containsVowels = false;
        String vowels = "aeiouAEIOU";

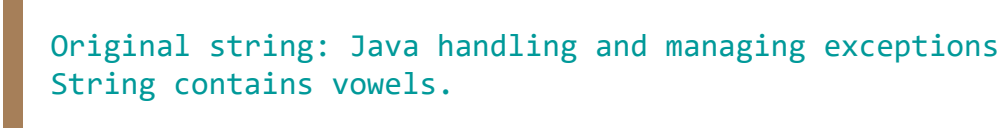
        for (int i = 0; i < text.length(); i++) {
            char ch = text.charAt(i);
            if (vowels.contains(String.valueOf(ch))) {
                containsVowels = true;
                break;
            }
        }
        if (!containsVowels) {
            throw new NoVowelsException("String does not contain any vowels.");
        }
    }
}

class NoVowelsException extends Exception {
    public NoVowelsException(String message) {
        super(message);
    }
}
```



```
}
```

Sample Output:



```
Original string: Java handling and managing exceptions  
String contains vowels.
```



```
Original string: Typy gyps fly.  
Error: String does not contain any vowels
```

Explanation:

In the above exercise,

- The main method is defined in the Vowel_Check class and serves as the program entry point.
- In the main method, a string of text is initialized with a value. This string represents the input to be checked for vowels.
- The checkVowels method is called, passing the text string as an argument. This method checks if the string contains vowels.
- Inside the checkVowels method, a boolean variable containsVowels is initialized as false. This variable tracks whether vowels are found in the string.
- A for loop iterates through each character of the text string.
- After the loop, if containsVowels is still false, it means no vowels were found in the string. In this case, a NoVowelsException is thrown with the message "String does not contain any vowels."
- The NoVowelsException class is a custom exception class that extends the base Exception class. It provides a constructor that takes a message parameter and passes it to the superclass constructor using the super keyword.
- If a NoVowelsException occurs in the main method, it is caught, and an appropriate error message is printed.

Flowchart:

