BeginwithJava

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Programming Questions and Exercises : Methods

Question 1

Write a program with a method named getTotal that accepts two integers as an argument and return its sum. Call this method from main( ) and print the results.

Show the answer.

```
import java.util.Scanner;

public class SumTwoNumber
{
    public static void main(String[] args)
    {
        Scanner console = new Scanner(System.in);
        int num1, num2;

        System.out.print("Enter first number: ");
        num1 = console.nextInt();

        System.out.print("Enter second number: ");
        num2 = console.nextInt();

        int sum = getTotal(num1, num2);

        System.out.println("Sum: " + sum);
    }

    public static int getTotal(int number1, int number2)
    {
        return number1 + number2;
    }
}
```

Question 2

Write a method named isEven that accepts an int argument. The method should return true if the argument is even, or false otherwise. Also write a program to test your method.

Show the answer.

```
import java.util.Scanner;

public class TestEven
{
    public static void main(String[] args)
    {
        Scanner console = new Scanner(System.in);
        int num;

        System.out.print("Enter an integer: ");
        num = console.nextInt();

        if(isEven(num))
        {
            System.out.println("Number is even");
        }
        else
        {
            System.out.println("Number is odd");
        }
    }

    public static boolean isEven(int number)
    {
        if(number % 2 == 0)
        {
            return true;
        }
        else
        {
            return false;
        }
    }
}
```

Question 3

Write a value-returning method, isVowel that returns the value true if a given character is a vowel, and otherwise returns false. In main() method accept a string from user and count number of vowels in that string.

Show the answer.

```
import java.util.Scanner;

public class TestEven
{
    public static void main(String[] args)
    {
        Scanner console = new Scanner(System.in);
        String sentence;

        System.out.print("Enter a string: ");
        sentence = console.nextLine();

        int count = 0;

        for(int i = 0; i < sentence.length(); i++)
        {
            if(isVowel(sentence.charAt(i)))
            {
                count++;
            }
        }

        System.out.println("Number of vowels: " + count);
    }

    public static boolean isVowel(char letter)
    {
        switch(letter)
        {
            case 'a':
            case 'A':
            case 'e':
            case 'E':
            case 'i':
            case 'I':
            case 'o':
            case 'O':
            case 'u':
            case 'U':
                return true;
            default:
                return false;
        }
    }
}
```

Question 4

A prime number is a number that is evenly divisible only by itself and 1. For example, the number 5 is prime because it can be evenly divided only by 1 and 5. The number 6, however, is not prime because it can be divided evenly by 1, 2, 4, and 6.
Write a method named isPrime, which takes an integer as an argument and returns true if the argument is a prime number, or false otherwise. Also write main method that displays prime numbers between 1 to 500.

Show the answer.

```
public class PrimeNumbers
{
    public static void main(String[] args)
    {
        for(int i = 1; i <= 500; i++)
        {
            if(isPrime(i))
            {
                System.out.print(i + " ");
            }
        }
    }

    public static boolean isPrime(int number)
    {
        for(int i = 2; i < number; i++)
        {
            if(number % i == 0)
            {
                return false;
            }
        }

        return true;
    }
}
```

Question 5

A nonnegative integer is called a palindrome if it reads forward and backward in the same way. For example, the numbers 5, 121, 3443, and 123454321 are palindromes. Write a method that takes as input a nonnegative integer and returns true if the number is a palindrome; otherwise, it returns false. Also write a program to test your method.

Show the answer.

```
import java.util.Scanner;
```

```
public class TestPalindrom
{
    public static void main(String[] args)
    {
        Scanner console = new Scanner(System.in);

        int num;

        System.out.print("Enter a number: ");
        num = console.nextInt();

        if(isPalindrom(num))
        {
            System.out.println("Number is palindrom");
        }
        else
        {
            System.out.println("Number is not palindrom");
        }
    }


    public static boolean isPalindrom(int number)
    {
        int temp = number;
        int remainder;
        int reverse = 0;

        while(temp > 0)
        {
            remainder = temp % 10;
            temp = temp / 10;
            reverse = reverse * 10 + remainder;
        }

        return reverse == number;
    }
}
```

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