עבודה במחשבים

שקד קודמן קולרן – י"א 2

תרגיל 4:

```java
import java.util.*;

public class Ex4
{
    static Scanner reader = new Scanner(System.in);

    // Read Int
    public static int NextInt(String message)
    {
        System.out.print(message);
        return reader.nextInt();
    }

    // Exercise Function
    public static int getNumOfChosenDigit(int num, int digit)
    {
        // this function takes a digit and a number and returns the count of the
times the digit is in the number
        // num - int - the number that will be checked
        // digit - int - the digit for checking
        // return - int
        int counter = 0;
        while (num != 0)
        {
            if (num % 10 == digit)
                counter++;

            num /= 10;
        }

        return counter;
    }

    // MAIN //
    public static void main(String[] args)
    {
        int digit = NextInt("Enter a digit: ");
        int num = NextInt("Enter a full number: ");

        System.out.println("The number of times the digit " + digit
                        + " is in the number " + num
                        + " is " + getNumOfChosenDigit(num, digit)
        );
    }
}
```

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תרגיל 5:

```java
import java.util.*;

public class Ex5
{
    static Scanner reader = new Scanner(System.in);

    // Read Int
    public static int NextInt(String message)
    {
        System.out.print(message);
        return reader.nextInt();
    }

    // Math.Random
    public static int Random(int a, int b)
    {
        // a function that returns a random int between two ints given
        if (a > b)
            return (int)(Math.random() * (a - b + 1)) + b;

        return (int)(Math.random() * (b - a + 1)) + a;
    }

    // MAIN //
    public static void main(String[] args)
    {
        int userNumber1 = NextInt("Enter a number: "), userNumber2 = NextInt("Enter another number: ");
        while (userNumber1 != -999 || userNumber2 != -999)
        {
            for (int i = 0; i < 5; i++)
            {
                System.out.println(Random(userNumber1, userNumber2));
            }

            userNumber1 = NextInt("Enter a number: ");
            userNumber2 = NextInt("Enter another number: ");
        }
    }
}
```

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תרגיל 6:

```java
import java.util.*;

public class Ex6
{
    static Scanner reader = new Scanner(System.in);

    // Read Int
    public static int NextInt(String message)
    {
        System.out.print(message);
        return reader.nextInt();
    }

    // fun
    public static int evenDigitCounter(int num)
    {
        // this function takes a number and returns the number of even digits
        // num - int - the number that will be checked
        // return - int
        int counter = 0;
        while (num != 0)
        {
            if ((num % 10) / 2 == 0)
                counter++;

            num /= 10;
        }

        return counter;
    }

    // MAIN //
    public static void main(String[] args)
    {
        int n = NextInt("Enter a number: ");
        int biggestNumber = 0, biggestDigits = 0;

        for (int i = 0; i < n; i++)
        {
            int num = NextInt("Enter a number: ");
            int numOfDigits = evenDigitCounter(num);

            if (numOfDigits > biggestDigits)
            {
                biggestNumber = num;
                biggestDigits = numOfDigits;
            }
        }

        System.out.println("The number that has the most even digits is " +
biggestNumber + " with impressive number of " + biggestDigits + " digits");
    }
}
```

עבודה במחשבים

שקד קודמן קולרן – י"א 2

תרגיל 7:

```java
import java.util.*;

public class Ex7
{
    static Scanner reader = new Scanner(System.in);

    // Read Int
    public static int NextInt(String message)
    {
        System.out.print(message);
        return reader.nextInt();
    }

    // func
    public static int items(int num, int capacity)
    {
        // returns the number of items for a given capacity and number
        if (num % capacity != 0)
            return (num / capacity) + 1;
        return num / capacity;
    }

    // MAIN //
    public static void main(String[] args)
    {
        int numOfPeople = NextInt("Enter the number of people: ");
        int capacityOfBusses = NextInt("Enter the capacity of a bus: ");
        int capacityOfTable = NextInt("Enter the capacity of a table: ");
        int capacityOfBoat = NextInt("Enter the capacity of a boat: ");

        System.out.println("the number of busses needed is " + items(numOfPeople,
capacityOfBusses)
                + "\nthe number of tables needed is " + items(numOfPeople,
capacityOfTable)
                + "\nand the number of boats needed is " + items(numOfPeople,
capacityOfBoat)
        );
    }
}
```

עבודה במחשבים

שקד קודמן קולרן – י"א 2

תרגיל 8:

```java
import java.util.*;

public class Ex8
{
    static Scanner reader = new Scanner(System.in);

    // Read Int
    public static int NextInt(String message)
    {
        System.out.print(message);
        return reader.nextInt();
    }

    // fun
    public static int smallestDivider(int a, int b)
    {
        // returns the smallest common divider of the two numbers given
        for (int i = 2; i <= Math.min(a, b); i++)
        {
            if (a % i == 0 && b % i == 0)
                return i;
        }
        return -1;
    }

    // MAIN //
    public static void main(String[] args)
    {
        int numOfUncopulebaleCopule = 0;
        for (int i = 0; i < 20; i++)
        {
            int num = NextInt("Enter a num: ");
            int num2 = NextInt("Enter another num: ");

            if (smallestDivider(num, num2) == -1)
                numOfUncopulebaleCopule++;
        }

        System.out.println("The number of uncopuleable couples is " +
numOfUncopulebaleCopule);
    }
}
```