שיעורי בית יסודות – לולאות FOR מונה וצובר, אופיר הופמן י3

תרגיל 3

```
// counter
int sum = 0;

// Repeat 20 times
for (int i = 1; i <= 20; i++)
{
    // Get first number from user
    Console.Write("Enter first number: ");
    int num1 = int.Parse(Console.ReadLine());

    // Get second number from user
    Console.Write("Enter second number: ");
    int num2 = int.Parse(Console.ReadLine());

    // Check if both numbers meets the conditions
    if((num1 > 0 && num2 > 0) && (num1 % 2 !=0 && num2 % 2
!= 0))
    {
        // Add both number to sum
        sum += num1 + num2;
    }
}
Console.WriteLine("Sum: " + sum);
```

תרגיל 4

```
// counters
int all_done = 0;
int not_everything = 0;
int non_done = 0;

// Get number of needed programs for this semester from user
Console.WriteLine("How many programs are needed to be handed in this
semester? ");
int programs_needed = int.Parse(Console.ReadLine());

// Repeat 30 times
for (int i = 1; i <= 30; i++)
{
    // Get number of programs handed in
    Console.WriteLine("How many programs did the student hand in? ");
    int programs_handed = int.Parse(Console.ReadLine());

    // Check if number of programs handed in is equal, less than the
needed, or 0
    if (programs_handed == programs_needed)
    {
        all_done++;
    }
    if (programs_handed  < programs_needed && programs_handed > 0)
    {
```

```
            not_everything++;
        }
        else
        {
            non_done++;
        }
}
Console.WriteLine($"{all_done} students handed in everything");
Console.WriteLine($"{not_everything} students handed in only a part of the
needed number");
Console.WriteLine($"{non_done} students did not hand in anything");
```

תרגיל 5

```
// Counters
int love_comedy = 0;
int all_three = 0;
int exactly_two = 0;

// Repeat 10 times
for (int i = 1; i <= 3; i++)
{
    // Get what movies types the students likes
    Console.WriteLine("Do you love comedy movies? (y or n): ");
    char comedy = char.Parse(Console.ReadLine());

    Console.WriteLine("Do you love drama movies? (y or n): ");
    char drama = char.Parse(Console.ReadLine());

    Console.WriteLine("Do you love thriller movies? (y or n):
");
    char thriller = char.Parse(Console.ReadLine());

    // Check if student likes comedy
    if (comedy == 'y')
    {
        love_comedy++;
    }
    // Check if student likes all movie types
    if (drama == 'y' && thriller == 'y' && comedy == 'y')
    {
        all_three++;
    }
    // Check if student likes exactly two types of movies
    else if ((thriller == 'y' && drama == 'y') || (thriller ==
'y' && comedy == 'y') || (drama == 'y' && comedy == 'y'))
    {
        exactly_two++;
    }
}
Console.WriteLine(love_comedy + " Students love comedy movies");
Console.WriteLine(all_three + " Students love all three types");
Console.WriteLine(exactly_two + " Students love exactly two
movie types");
```

תרגיל 6

```
// Counter
int failed = 0;

// Get number of tested from user
Console.WriteLine("How many were tested? ");
int tested = int.Parse(Console.ReadLine());

for (int i = 1; i <= tested; i++)
{
    // Get number of mistakes made on traffic signs questions
    Console.WriteLine("How many mistakes were made on traffic
signs questions? ");
    int sign_mistakes = int.Parse(Console.ReadLine());

    // Mistakes on other types of questions
    Console.WriteLine("How many other mistakes were made on
other questions? ");
    int otherQuestions_mistakes = int.Parse(Console.ReadLine());

    // Check if student failed according to requirements
    if (sign_mistakes > 0 || otherQuestions_mistakes > 3)
    {
        failed++;
    }
}

double fails_precentage = (failed / tested) * 100;
Console.WriteLine($"{failed} failed. That's {fails_precentage}%
of the tests");
```

המשך למטה

תרגיל 7

```
// Define an initial max and min numbers
int max = int.MinValue;
int min = int.MaxValue;

// Repeat 10 times
for (int i = 1; i <=10; i++)
{
    // Get a number from user
    Console.WriteLine("Enter a number: ");
    int num = int.Parse(Console.ReadLine());

    // Check if number is bigger than the current max
    if (num > max)
    {
        max = num;
    }
    // Otherwise - check if the number is smaller than the
current min
    else
    {
        if (num < min)
        {
            min = num;
        }
    }
}
Console.WriteLine("Max: " + max);
Console.WriteLine("Min: " + min);
```

תרגיל 8

```
// Counter
int proper_age = 0;

// Repeat 30 times
for (int i = 1; i <= 30; i++)
{
    // Get age from user
    Console.WriteLine("Enter age: ");
    int age = int.Parse(Console.ReadLine());

    // Check if age meets the requirements
    if (age >= 22 && age <= 44)
    {
        proper_age++;
    }
}
Console.WriteLine("People between 22 to 40 years old: " + proper_age);
```

תרגיל 9

```
// Counters
int three_activities = 0;
int two_activities = 0;
int moreThan_three = 0;
int more_toursThan_parties = 0;

int n = 100;

// Repeat n times
for (int i = 1; i <= n; i++)
{
    // Get number of tours the student went on
    Console.WriteLine("Enter number of tours: ");
    int tours = int.Parse(Console.ReadLine());

    // Get number of parties
    Console.WriteLine("Enter number of parties: ");
    int parties = int.Parse(Console.ReadLine());

    // Get number of movies watched
    Console.WriteLine("Enter number of movies: ");
    int movies = int.Parse(Console.ReadLine());

    // Check first condition
    if (tours >= 1 && parties >= 1 && movies >= 1)
    {
        three_activities++;
    }

    // Check second condition
    if ((tours >= 1 && parties >= 1 && movies == 0) || (tours >= 1 &&
parties >= 0 && movies == 1) || (tours >= 0 && parties >= 1 && movies ==
1))
    {
        two_activities++;
    }

    // Check third condition
    if (tours > 3 || parties > 3 || movies > 3)
    {
        moreThan_three++;
    }

    // Check fourth condition
    if (tours > parties)
    {
        more_toursThan_parties++;
    }

}
Console.WriteLine("Had all three activities: " + three_activities);
Console.WriteLine("Had exactly two activities: " + two_activities);
Console.WriteLine("Had more than three times an activity: " +
moreThan_three);
Console.WriteLine("Had more tours than parties: " +
more_toursThan_parties);
```

תרגיל 10

```
// Counters
int three_shows = 0;
int one_show = 0;

// Repeat 2000 times
for (int i = 1; i <= 3; i++)
{
    // Get what shows the student want to buy tickets for
    Console.WriteLine("Do you want to purchase a ticket for
show A? (0 or 1)");
    int show1 = int.Parse(Console.ReadLine());

    Console.WriteLine("Do you want to purchase a ticket for
show B? (0 or 1)");
    int show2 = int.Parse(Console.ReadLine());

    Console.WriteLine("Do you want to purchase a ticket for
show C? (0 or 1)");
    int show3 = int.Parse(Console.ReadLine());

    // Check if student wants to purchase all three or just
one
    if (show1 == 1 && show2 == 1 && show3 == 1)
    {
        three_shows++;
    }
    else if ((show1 == 1 && show2 == 0 && show3 == 0) ||
(show1 == 0 && show2 == 1 && show3 == 0) || (show1 == 0 &&
show2 == 0 && show3 == 1))
    {
        one_show++;
    }
}
Console.WriteLine($"{three_shows} students purchesed
tickets for all three shows");
 Console.WriteLine($"{one_show} students purchesed tickets
                    for one show");
```