# מסלול Full Stack

קמפוס ת"א
זום 2021

שם המרצה: דורון אזולאי

# ברוכים הבאים!

# Lesson Agenda

- Node – npm
- TypeScript – compiler
- Load Ts
- Operators – % , /
- Simple Cast
- Exercise
- Q&A

# Node: npm

https://nodejs.org/en/download/

# TypeScript: compiler

open cmd/terminal and write

**npm i -g typescript**

```
~ npm install -g typescript

changed 1 package, and audited 2 packages in 976ms

found 0 vulnerabilities
```

then write

**npm list -g**

```
~ npm list -g
C:\Users\dufa1\AppData\Roaming\npm
`-- typescript@4.8.2
```

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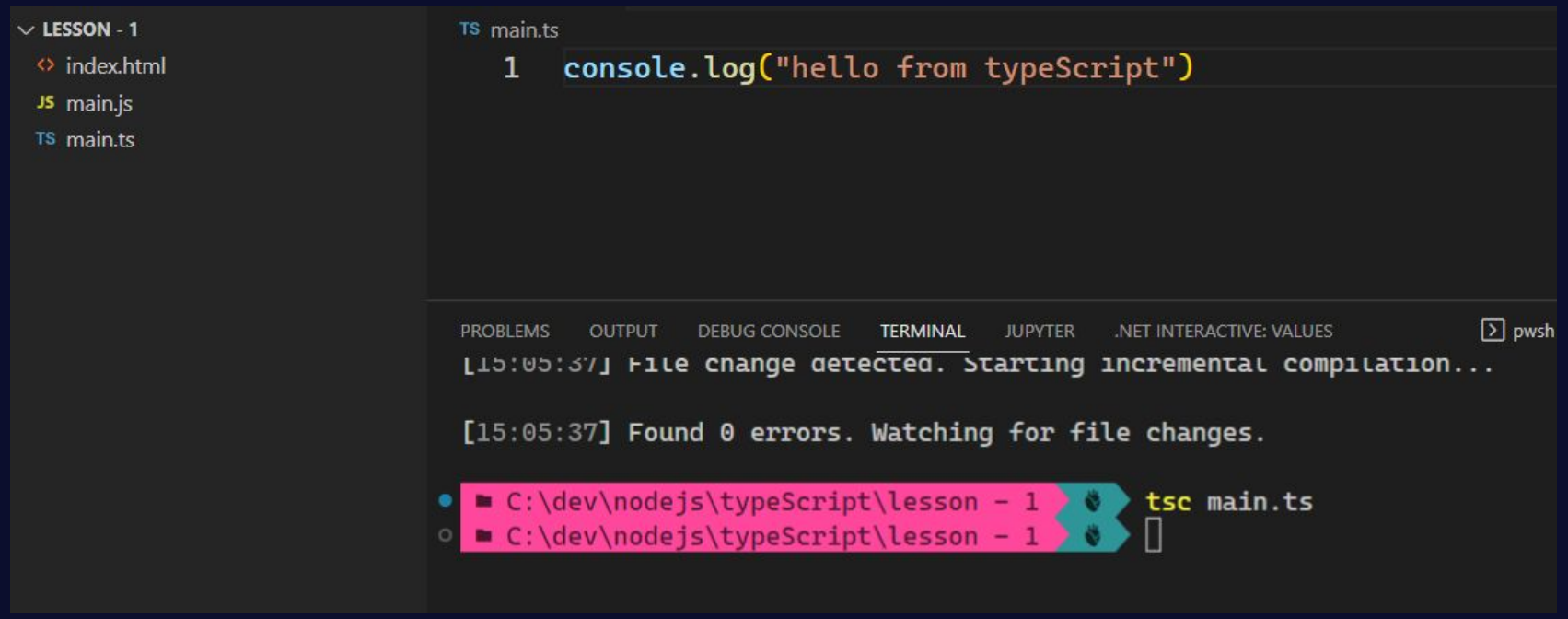
# Load TypeScript:

create main.ts file write some code and save the file.
open cmd/terminal and write
**tsc main.ts**
if the compile done success it will create
main.js file



# TypeScript Config: tsconfig.json

the config file control the ts compiler settings
open cmd/terminal and write

**tsc --init**

this command will create
tsconfig.json file

# Operators: Arithmetic Operators

| Operator | Description | Example |
|---|---|---|
| + (Addition) | returns the sum of the operands | a + b is 15 |
| - (Subtraction) | returns the difference of the values | a - b is 5 |
| * (Multiplication) | returns the product of the values | a * b is 50 |
| / (Division) | performs division operation and returns the quotient | a / b is 2 |
| % (Modulus) | performs division operation and returns the remainder | a % b is 0 |
| ++ (Increment) | Increments the value of the variable by one | a++ is 11 |
| -- (Decrement) | Decrements the value of the variable by one | a-- is 9 |

# Operators: Relational Operators

| Operator | Description | Example |
|---|---|---|
| > | Greater than | (A > B) is False |
| < | Lesser than | (A < B) is True |
| >= | Greater than or equal to | (A >= B) is False |
| <= | Lesser than or equal to | (A <= B) is True |
| == | Equality | (A == B) is false |
| != | Not equal | (A != B) is True |

# Operators: Logical Operators

| Operator | Description | Example |
|---|---|---|
| && (And) | The operator returns true only if all the expressions specified return true | (A > 10 && B > 10) is False |
| \|\| (OR) | The operator returns true if at least one of the expressions specified return true | (A > 10 \|\| B >10) is True |
| ! (NOT) | The operator returns the inverse of the expression's result. For E.g.: !(>5) returns false | !(A >10 ) is True |

# Operators: Assignment Operators

| Operator | Description | Example |
|---|---|---|
| = (Simple Assignment) | Assigns values from the right side operand to the left side operand | C = A + B will assign the value of A + B into C |
| += (Add and Assignment) | It adds the right operand to the left operand and assigns the result to the left operand. | C += A is equivalent to C = C + A |
| -= (Subtract and Assignment) | It subtracts the right operand from the left operand and assigns the result to the left operand. | C -= A is equivalent to C = C - A |
| *= (Multiply and Assignment) | It multiplies the right operand with the left operand and assigns the result to the left operand. | C *= A is equivalent to C = C * A |
| /= (Divide and Assignment) | It divides the left operand with the right operand and assigns the result to the left operand. | |

# Simple Cast:

## string to number

```
let days = Number("22")
console.log(days) // 22

let days = Number("5.7")
console.log(days) // 5.7
```

## string to Int

```
let days = parseInt("22")
console.log(days) // 22

let days = parseInt("5.7")
console.log(days) // 5
```

## number to string

```
let days = 10.toString()
console.log(days) // "10"

let days = (5.7).toString()
console.log(days) // "5.7"

let days = (2.232).toFixed(2)
console.log(days) // "2.23"

let days = (2.232).toFixed()
console.log(days) // "2"
```

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# Exercise:

https://docs.google.com/document/d/11k201AIZ4NRmqp-pItOB52_FptavfbtAt-GWMnnfERQ/edit?usp=sharing

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# Q&A