Angular-HOL
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HOL-#02
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Q1. Create a directory and write TypeScript code and compile them to ES5.

[a] Declare variables for THREE different basic data types assign values to them and display the same.

[b] Try to assign different data type than the one which is specified to the variables and record your observation.

[c] Compile the TS code and get ES5 JS code.
Run the JS code.

Q2. Write functions for the following:

[a] A function which will help the user to greet/wish a user
- The parameter to be passed is the user name. Use appropriate type.

[b] A function which take a string and capitalizes it.

[c] Invoke the functions with appropriate parameter
    Record your observation

[d] Invoke the function with in-appropriate data type as the parameter. Record your observation

Q3. You next challenge!
Write function to implement the enhanced function features of TS

[a] A function to compute the Simple Interest.
Hope you remember the formula. si = (p * t * r) / 100
Where p -> Principle amount, t -> Time period in years and r -> Rate of interest p.a.

NOTE: The default rate of interest is 10%

- Invoke the function with all the required parameters
- Invoke the function with only the 'p' and 't'

[b] A function by name `range` which will generate a range of integers.

It takes THREE parameters: start, stop and step values However, the 'step' parameter is optional. In such case the next value will be increment by 1

On the other hand if the 'step' value is specified the next value will be increment by the given step value.

Sample call to the function could be as follows:
```
range(1, 5);          // 1, 2, 3, 4, 5
range(1, 10, 2); // 1, 3, 5, 7, 9
```

[c] A function to find the sum of the arguments passed.

The function could take variable number of parameters.

HINT: The 'rest' type of function

```
summing();
summing(1, 2, 3, 4, 5);
summing(10, 20, 33);
```

[d] A function which take the 'title', 'name' and 'msg' as named parameters and display the output as follows:

Sample call to the function:
```
message({title: 'Dr.', name: 'John', msg: 'Appointment please'})
Output: Dr. John
        Appointment please.

message({title: 'Miss', msg: 'Welcome home.', name: 'Suzy'})
Output: Miss Suzy
        Welcome home.
```

We should to able to pass the named parameters in an arbitrary order.

[e] Implement the `printStatusCode()` function which can take the parameters as a string or a number.

Refer PPTs.

Check what happens if you pass other than string or number.
Record your observation.

Q4. Your Next Challenge!
Can we put the above defined functions in a Module and expose the functionality.

Import the module in another TS file and check the functionality of the functions.

Q5. Define a class to represent a point in x-y plane.

A line in an x-y plane is represented by two points.
Create two point instance to represent the line.

Find the Slope of the line.

Q6. Implement a point in a 3D plan.
This will have x co-ordinate value, y co-ordinate value besides
the z co-ordinate value.

Create an instance of the 3D point object.

Display it's different co-ordinate values.