

The easiest way to explore TypeScript which does not require installation of additional software on your computer is to use online playgrounds such as:

- <https://www.typescriptlang.org/play>
- <https://replit.com/languages/typescript>

1. Declare/define the following constants/variables
 - a. A constant initialized to your name (use implicit type)
 - b. A constant initialized to your high school name (use explicitly type)
 - c. A variable to hold average number of messages (email, Slack, Discord,) you received daily
 - d. Use `console.log()` to print these three identifiers above
2. String concatenation
 - a. Use the variable in (1c) and string concatenation (the `+` operator) in a `console.log()` to print "I receive ____ messages daily"
 - b. Repeat (2a) but use string interpolation within pair of backquotes ``I receive ${____} messages daily``
 - c. Repeat (2b), but exaggerate the message count by using an arithmetic expression inside `${____}`
3. Arrays:
 - a. Declare an array, initialized to three or more city names of your choice
 - b. Use a for-loop to print the city names to produce the following output
My city choice #1 is ____
My city choice #2 is ____
My city choice #3 is ____
 - c. Declare an array of strings named `books`, initialized it to an empty array
 - d. Use the array `.push()` method to add three or more book titles of your choice to the array in (3c)
 - e. Use a for-of loop to print the book titles in the array together with the length of each title:
Title _____ is _____ character long
Title _____ is _____ character long
Title _____ is _____ character long
4. Define a function `sayHello()` that takes a string parameter and use `console.log()` to print "Hello _____. Nice to meet you!"
5. Call the function `sayHello()` in (4) using a person name of your choice
6. Define a function `sayRepeatedHello()` that takes a string and a number, such that calling `sayRepeatedHello("Bob", 3)` will print "Hello Hello Hello Bob" (**on a single line**)
7. Multiple/Union Types
 - a. Declare a variable of multiple types (also known as union types) string or number
 - b. Assign a string value into the variable
 - c. Print the type using `typeof`
 - d. Assign a numeric value into the variable
 - e. Print the type using `typeof`

8. Define function `showDetails()` that takes a parameter of multiple type string or number.
When invoked with a string, the function prints
The string _____ has _____ characters
When involved with a number the function prints
The number _____ is odd (or even)
9. Define a type alias named `PlanetType` to describe planet objects with the following properties:
 - a. name (string)
 - b. daysOfOrbit (number)
 - c. isInnerPlanet (boolean)
10. Type alias
 - a. Declare a variable to hold a planet object, use the type in (9)
 - b. Initialize that variable with a planet of your choice
 - c. Declare an array to hold planet objects, use the type in (9)
 - d. Use `.push()` to insert three or more planets to the array in (10c)
 - e. Use a loop of your choice to iterate over the array in (10c) and compute the average orbit days of your planets