

TypeScript Test

Instructions

- Write all your solutions in a single TypeScript file
- Include proper type annotations for all variables and functions
- Each task should be solved in a separate function

Task 1

Create a type called `Person` with these properties:

- `firstName`: string
- `lastName`: string
- `age`: number

Create a function called `createGreeting` that:

1. Takes a parameter of type `Person`
2. Returns a greeting message as a string
3. For age 18 or higher: "Welcome `[firstName]` `[lastName]`! You can enter."
4. For age under 18: "Sorry `[firstName]` `[lastName]`, you are too young."

Task 2

Create a type called `NumberArray` that represents an array of numbers.

Create a function called `calculateNumbers` that:

1. Takes a parameter of type `NumberArray`
2. Returns an object containing:
 - `positiveCount`: number of positive numbers
 - `negativeCount`: number of negative numbers
 - `sum`: sum of all numbers

Task 3

Create an enum called StudentGrade with values A, B, C, D, and F.

Create a function called calculateGrade that:

1. Takes a number parameter (score) between 0 and 100
2. Returns the corresponding StudentGrade based on:
 - A: 90-100
 - B: 80-89
 - C: 70-79
 - D: 60-69
 - F: 0-59