CS445 - Intro To TypeScript

Exercise 1.

```typescript
class University {
    name: string;
    dept: string;
    constructor(name: string, dept: string) {
        this.name = name;
        this.dept = dept;
    }
    graduation(year: number) {
        console.log(`Graduating ${this.dept} ${year}
students`);
    }
}

let miu: University = new University("MIU", "MSD");
miu.graduation(2021);
```

Exercise 2.

```typescript
let bankAccount: {
    money: number,
    deposit(value: number): void
} = {
    money: 2000,
    deposit(value) {
        this.money += value;
    }
};
let myself: {
```

```
    name: string,
    bankAccount: typeof bankAccount,
    hobbies: string[];
} = {
    name: "John",
    bankAccount: bankAccount,
    hobbies: ["Violin", "Cooking"]
};

myself.bankAccount.deposit(3000);
console.log(myself);
```

Exercise 3:

```
class Car {
    name:string;
    acceleration:number;
    constructor(name:string) {
        this.name = name;
        this.acceleration = 0;
    }
    honk():void {
        console.log(` ${this.name} is saying:
Tooooooooooot!`);
    }
    accelerate(speed:number):void {
        this.acceleration = this.acceleration + speed;
    }
}

let car:Car = new Car("BMW");
car.honk(); // BMW is saying: Tooooooooooot!
```

```
console.log(car.acceleration); // 0
car.accelerate(60);
console.log(car.acceleration); // 60
```

Exercise 4:

```
let baseObject: {
    width: number,
    length: number
} = {
    width: 0,
    length: 0
};
let rectangle:any = Object.create(baseObject);

rectangle.width = 5;
rectangle.length = 2;

rectangle.calcSize = function ():number {
    return this.width * this.length;
};

console.log(rectangle.calcSize()); // 10
```