CS 284: Quiz 1 – Spring 2020

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Exercise 1 (*10 points*)

1. Suppose we have the following code:

```
1  class Test{
2    private int m;
3
4    public static void func(){
5        // some code...
6    }
7  }
```

- What is the correct way to replace line 2 so that variable m can be referenced within method func?

    A. protected int m;

    B. public int m;

    C. static int m;

    D. int m;

2. Define the following two classes:

- `BankAccount`: Has a balance and supports the following operations:

    - `BankAccount()`: Creates an account setting the balance to 0

    - `BankAccount(double initialBalance)`

    - `deposit(double amount)`

    - `withdraw(double amount)`: Should print an error message if the balance is insufficient. This operation does not return any value.

    - `getBalance()`

    - `transfer(double amount, BankAccount destination)`. Should print an error message is there are insufficient funds in the origin account.

- `SavingsAccount`: A bank account that also has an interest rate and supports the following operations:

    - `SavingsAccount(double rate)`: Creates a savings account with the given interest rate and 0 as balance. Eg. For a 1% interest rate the argument for this constructor would be 0.01.

    - `addInterest()`: Deposits the interest w.r.t. the current balance.