

LAB2_assignment

Name: 신민선

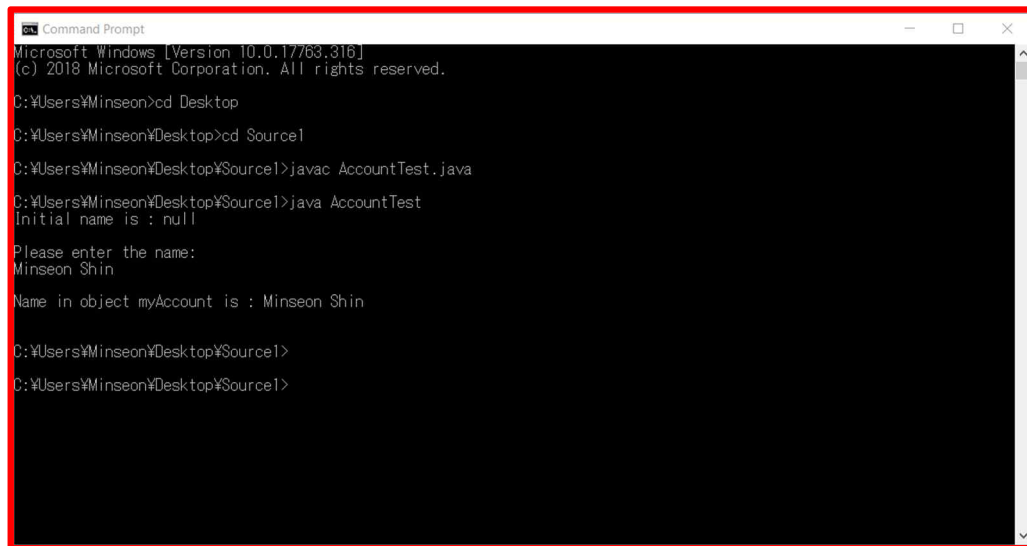
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Due Date: 03/17

Instructions of Task 1:



```
Microsoft Windows [Version 10.0.17763.316]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\Minseon>cd Desktop
C:\Users\Minseon\Desktop>cd Source1
C:\Users\Minseon\Desktop\Source1>javac AccountTest.java
C:\Users\Minseon\Desktop\Source1>java AccountTest
Initial name is : null

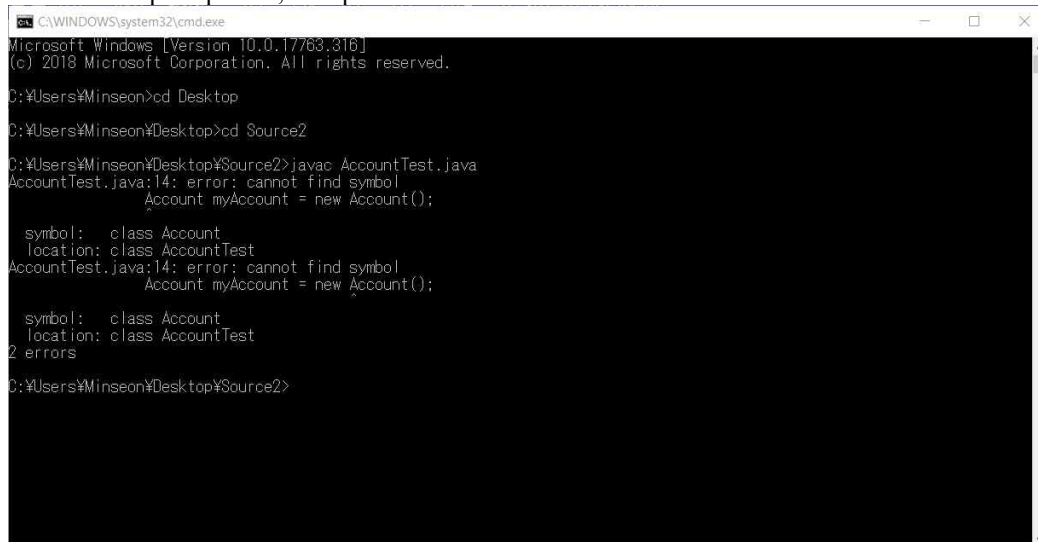
Please enter the name:
Minseon Shin

Name in object myAccount is : Minseon Shin

C:\Users\Minseon\Desktop\Source1>
C:\Users\Minseon\Desktop\Source1>
```

Instructions of Task 2 (about class name and .java file name)

In command prompt area, Compile the source codes.



```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows [Version 10.0.17763.316]
(c) 2018 Microsoft Corporation. All rights reserved.

D:\Users\Minseon>cd Desktop
D:\Users\Minseon\Desktop>cd Source2
D:\Users\Minseon\Desktop\Source2>javac AccountTest.java
AccountTest.java:14: error: cannot find symbol
    Account myAccount = new Account();
                        ^
  symbol:   class Account
  location: class AccountTest
AccountTest.java:14: error: cannot find symbol
    Account myAccount = new Account();
                        ^
  symbol:   class Account
  location: class AccountTest
2 errors

D:\Users\Minseon\Desktop\Source2>
```

There is a completion error. Yes!

So, Fix the error = ACCOUNT.java is not same as class name.

(1) We have to fix the name from ACCOUNT.java to Account.java.

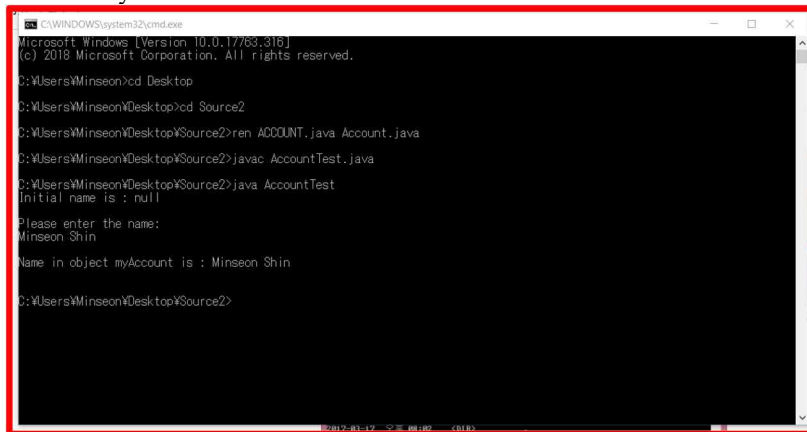
(class file name= class name)

Or

(2) We have to fix the name to "ACCOUNT.java" in AccountTest.java

Then, here is the result.

(1) Revise only file name



```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows [Version 10.0.17763.316]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\Minseon>cd Desktop
C:\Users\Minseon\Desktop>cd Source2
C:\Users\Minseon\Desktop\Source2>ren ACCOUNT.java Account.java
C:\Users\Minseon\Desktop\Source2>javac AccountTest.java
C:\Users\Minseon\Desktop\Source2>java AccountTest
Initial name is : null
Please enter the name:
Minseon Shin
Name in object myAccount is : Minseon Shin

C:\Users\Minseon\Desktop\Source2>
```

(2) Revise class(code) name.

```
// Fig. 3.1: ACCOUNT.java
// Account class that contains a name instance variable
// and methods to set and get its value.

public class ACCOUNT
{
    private String name;

    //method to set the name in the object
    public void setName(String name)
    {
        this.name = name;
    }

    //method to retrieve the name from the object
    public String getName()
    {
        return name; // return value of the name to caller
    }
} //end class account
```

```
// Fig. 3.2: AccountTest.java
// Creating and manipulating an Account object.
import java.util.Scanner;

public class AccountTest
{
    public static void main(String[] args)
    {
        //create a Scanner object to obtain input from the
        command window
        Scanner input = new Scanner(System.in);

        //create an Account object and assign it to
        myAccount
        ACCOUNT myAccount = new ACCOUNT();

        //display initial value of name(null)
        System.out.printf("Initial name is : %s\n",
        myAccount.getName());

        //prompt for and read name
        System.out.println("Please enter the name: ");
        String theName = input.nextLine(); // read a
        line of test
        myAccount.setName(theName); // put theName in
        myAccount
        System.out.println(); // outputs a black line

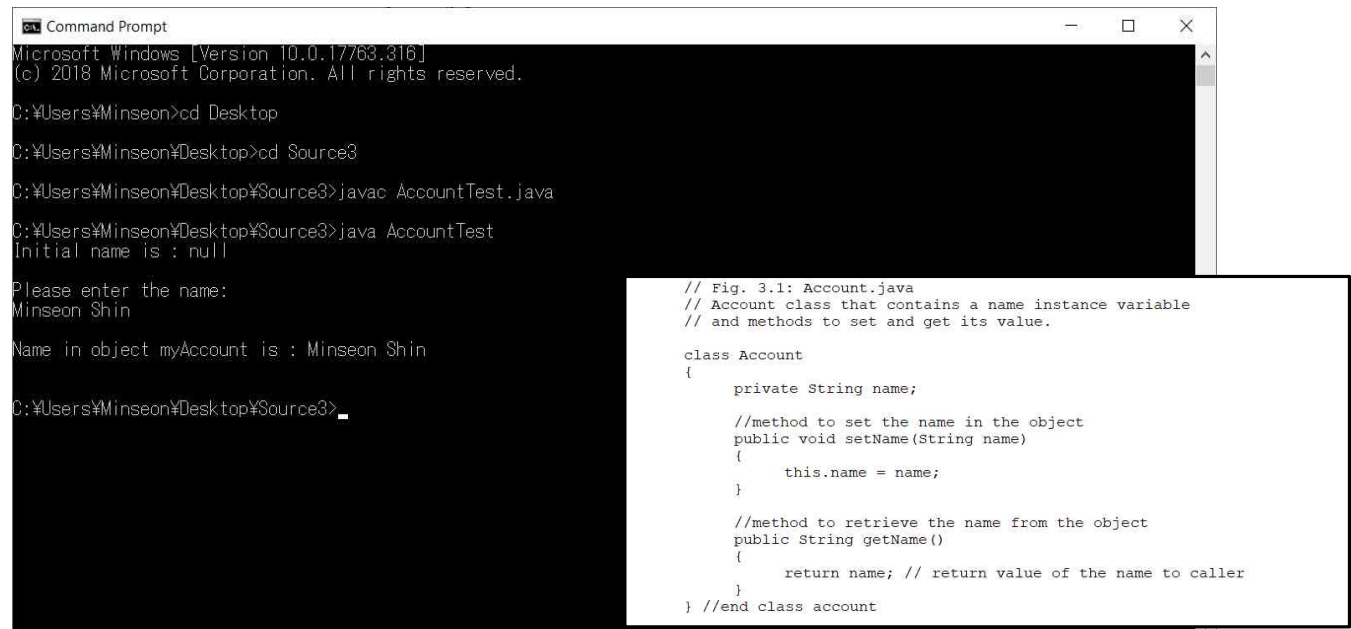
        //display the name stored in object myAccount
        System.out.printf("Name in object myAccount is : %s\n", myAccount.getName());
    }
} //end class account
```

Instructions of Task 3 (about class name and .class file name)

There is no compilation error.

Because default is public as Access modifier(such as public, default).

So if we don't write on access modifier, Computer automatically compile in public mode,



The screenshot shows a Windows Command Prompt window with the following text:

```
Microsoft Windows [Version 10.0.17763.316]
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C:\Users\Minseon>cd Desktop
C:\Users\Minseon\Desktop>cd Source3
C:\Users\Minseon\Desktop\Source3>javac AccountTest.java
C:\Users\Minseon\Desktop\Source3>java AccountTest
Initial name is : null

Please enter the name:
Minseon Shin

Name in object myAccount is : Minseon Shin

C:\Users\Minseon\Desktop\Source3>_
```

An inset box on the right shows the source code for `Account.java`:

```
// Fig. 3.1: Account.java
// Account class that contains a name instance variable
// and methods to set and get its value.

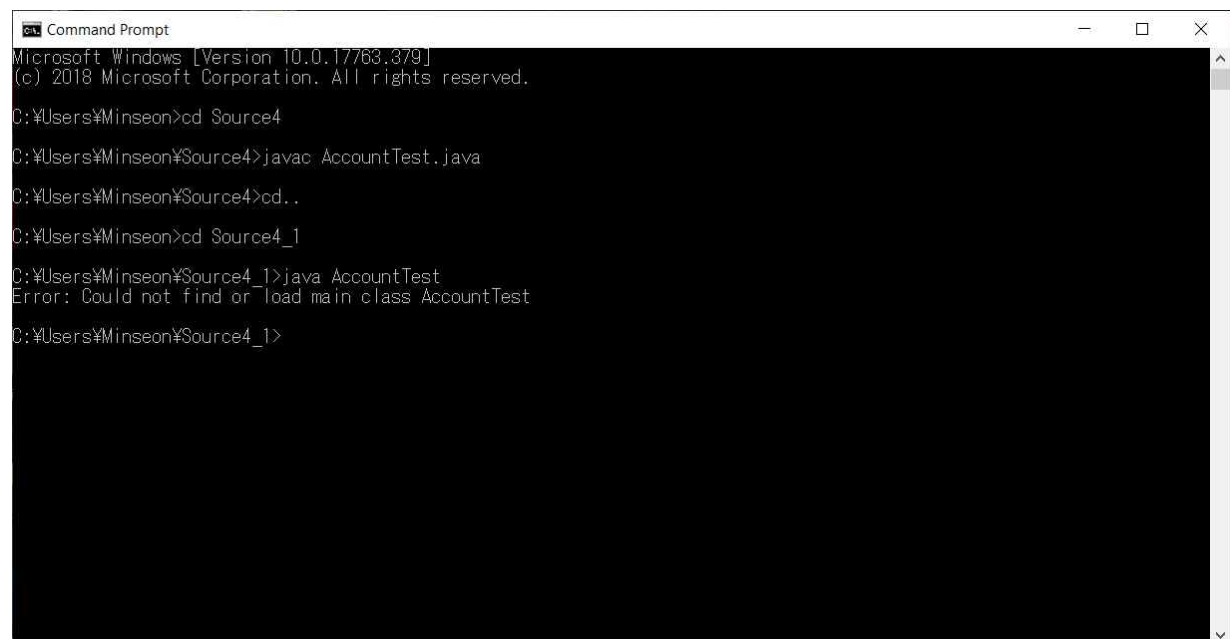
class Account
{
    private String name;

    //method to set the name in the object
    public void setName(String name)
    {
        this.name = name;
    }

    //method to retrieve the name from the object
    public String getName()
    {
        return name; // return value of the name to caller
    }
} //end class account
```

Instructions of Task 4(about setting ClassPath)

Yes, I got runtime error.



The screenshot shows a Windows Command Prompt window with the following text:

```
Microsoft Windows [Version 10.0.17763.379]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\Minseon>cd Source4
C:\Users\Minseon\Source4>javac AccountTest.java
C:\Users\Minseon\Source4>cd..
C:\Users\Minseon>cd Source4_1
C:\Users\Minseon\Source4_1>java AccountTest
Error: Could not find or load main class AccountTest

C:\Users\Minseon\Source4_1>
```

This error is because of classpath.

For fixing this error, we have to set classpath in command prompt.

In command prompt, enter the Source4_1 directory and then “set classpath = C:\Users\Minseon\Source4”
Then we can fix the error.

```
Command Prompt
Microsoft Windows [Version 10.0.17763.379]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\Minseon>cd Source4
C:\Users\Minseon\Source4>javac AccountTest.java
C:\Users\Minseon\Source4>cd..
C:\Users\Minseon>cd Source4_1
C:\Users\Minseon\Source4_1>java AccountTest
Error: Could not find or load main class AccountTest
C:\Users\Minseon\Source4_1>set classpath=C:\Users\Minseon\Source4
C:\Users\Minseon\Source4_1>java AccountTest
Initial name is : null

Please enter the name:
Minseon Shin

Name in object myAccount is : Minseon Shin

C:\Users\Minseon\Source4_1>
```

Instructions of Task 5:(communication between a class in one default package and a public class in another non-default package)

Yes, I got compile error.

First, similar to task 4, set the classpath like C:\Users\Minseon\Source5

Second, the reason is that default package can access only same default-package in same area.

For fixing the error, I have to make another package named "Source5"(non-default package).

Then, I move a class named "Source5".

After that, I write on "import Source5.Account;" in AccountTest.java that has a main class.

```
// Fig. 3.1: Account.java
// Account class that contains a name instance variable
// and methods to set and get its value.

package Source5;
public class Account
{
    private String name;

    //method to set the name in the object
    public void setName(String name)
    {
        this.name = name;
    }

    //method to retrieve the name from the object
    public String getName()
    {
        return name; // return value of the name to caller
    }
} //end class account

// Fig. 3.2: AccountTest.java
// Creating and manipulating an Account object.
package AccountTestPackage;
import java.util.Scanner;
import Source5.Account;

public class AccountTest
{
    public static void main(String[] args)
    {
        //create a Scanner object to obtain input from the
        command window
        Scanner input = new Scanner(System.in);

        //create an Account object and assign it to
        myAccount
        Account myAccount = new Account();

        //display initial value of name(null)
        System.out.printf("Initial name is : %s\n\n",
        myAccount.getName());

        //prompt for and read name
        System.out.println("Please enter the name: ");
        String theName = input.nextLine(); // read a
        line of test
        myAccount.setName(theName); // put theName in
        myAccount
        System.out.println(); // outputs a black line

        //display the name stored in object myAccount
        System.out.printf("Name in object myAccount is : %s%
        n\n", myAccount.getName());
    }
} //end class account
```

Instructions of Task 6: (communication between a class in a **non-default** package and a public class in another **non-default** package)

Did you get compile error? **Yes**.

First, similar to task 4, set the classpath like C:\Users\Minseon\Source6 in command prompt.

Second, like Task5, we got a error because we don't add a line **"import"** part.

So, in AccountTest.java , Add **"import Accountpackage.Account;"** line.

```
// Fig. 3.2: AccountTest.java
// Creating and manipulating an Account object.

package AccountTestPackage;

import java.util.Scanner;
import AccountPackage.Account;

public class AccountTest
{
    public static void main(String[] args)
    {
        //create a Scanner object to obtain input from the
        command window
        Scanner input = new Scanner(System.in);

        //create an Account object and assign it to
        myAccount
        Account myAccount = new Account();

        //display initial value of name(null)
        System.out.printf("Initial name is : %s\n",
        myAccount.getName());

        //prompt for and read name
        System.out.println("Please enter the name: ");
        String theName = input.nextLine();    // read a
        line of test
        myAccount.setName(theName); // put theName in
        myAccount
        System.out.println(); // outputs a black line

        //display the name stored in object myAccount
        System.out.printf("Name in object myAccount is : %s%
        n\n", myAccount.getName());
    }
} //end class account
```

Instructions of Task 7 :(communication between a class in a **non-default** package and a **default class** in another **non-default** package)

Yes. I got a error.

First, similar to task 4, set the classpath like C:\Users\Minseon\Source7

Second, as definition of Access modifier, default class can't access and import another class.

So, in order to access 'Account' class, we have to **change modifier** from default to public.

And add the code line "import AccountPackage. Account;" in AccountTest.java

Then Compiler can access both class and compile the code.

```
// Fig. 3.1: Account.java
// Account class that contains a name instance variable
// and methods to set and get its value.

package AccountPackage;
public class Account
{
    private String name;

    //method to set the name in the object
    public void setName(String name)
    {
        this.name = name;
    }

    //method to retrieve the name from the object
    public String getName()
    {
        return name; // return value of the name to caller
    }
} //end class account
```

```
// Fig. 3.2: AccountTest.java
// Creating and manipulating an Account object.

package AccountTestPackage;
import java.util.Scanner;
import AccountPackage.Account;

public class AccountTest
{
    public static void main(String[] args)
    {
        //create a Scanner object to obtain input from the
        command window
        Scanner input = new Scanner(System.in);

        //create an Account object and assign it to
myAccount
        Account myAccount = new Account();

        //display initial value of name(null)
        System.out.printf("Initial name is : %s\n\n",
myAccount.getName());

        //prompt for and read name
        System.out.println("Please enter the name: ");
        String theName = input.nextLine(); // read a
line of test
        myAccount.setName(theName); // put theName in
myAccount
        System.out.println(); // outputs a black line

        //display the name stored in object myAccount
        System.out.printf("Name in object myAccount is : %s%
n\n", myAccount.getName());
    }
} //end class account
```