



Week7 – Copy Constructor/ Array/UML

COMP90041 Programming and software
development

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Constructor

- A constructor is a **special method** that is used to **initialize objects**.

The constructor is **called when an object of a class is created**. It can be used to **set initial values** for object attributes:

- The name of the constructor must be same as the class name
- Can each class have more than one constructor?

Constructor

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The constructor is **called when an object of a class is created**. It can be used to **set initial values** for object attributes:

- The name of the constructor must be as the class name
- We can have several constructors as long as each constructor has different parameters



Copy Constructor

- Copy Constructor is a special type of constructor that takes **same class as argument**. Copy constructor is used to **provide a copy** of the specified object.



Array

- Basic syntax:

```
DataType[] varName = new DataType[size];
```



Array – Fundamental

- Basic syntax:

```
DataType[] varName = new DataType[size];
```

Example:

```
Int[] intArray = new int[10];
```



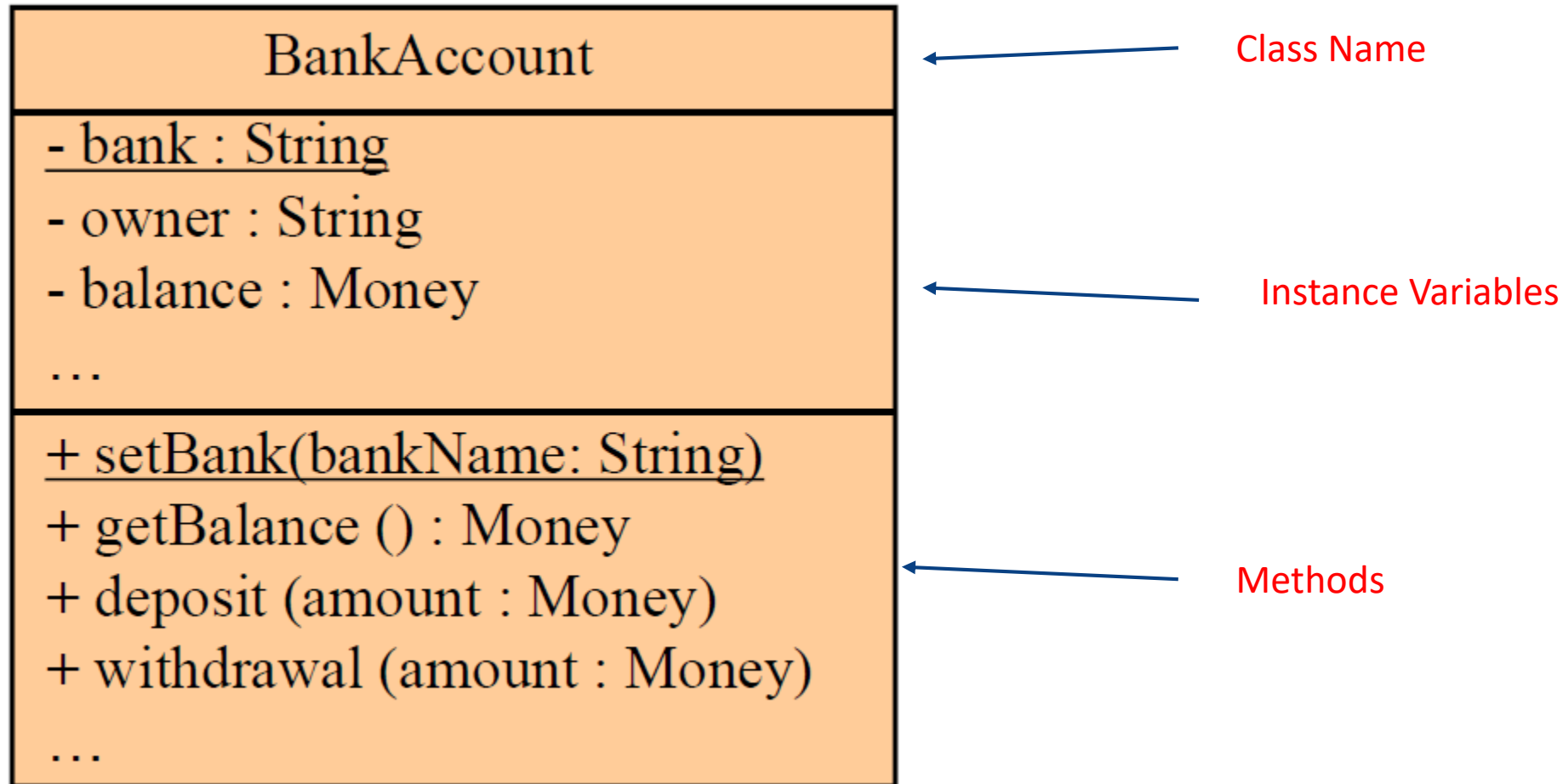
Array – Fundamental

- Basic syntax:

```
DataType[] varName = new DataType[size];
```

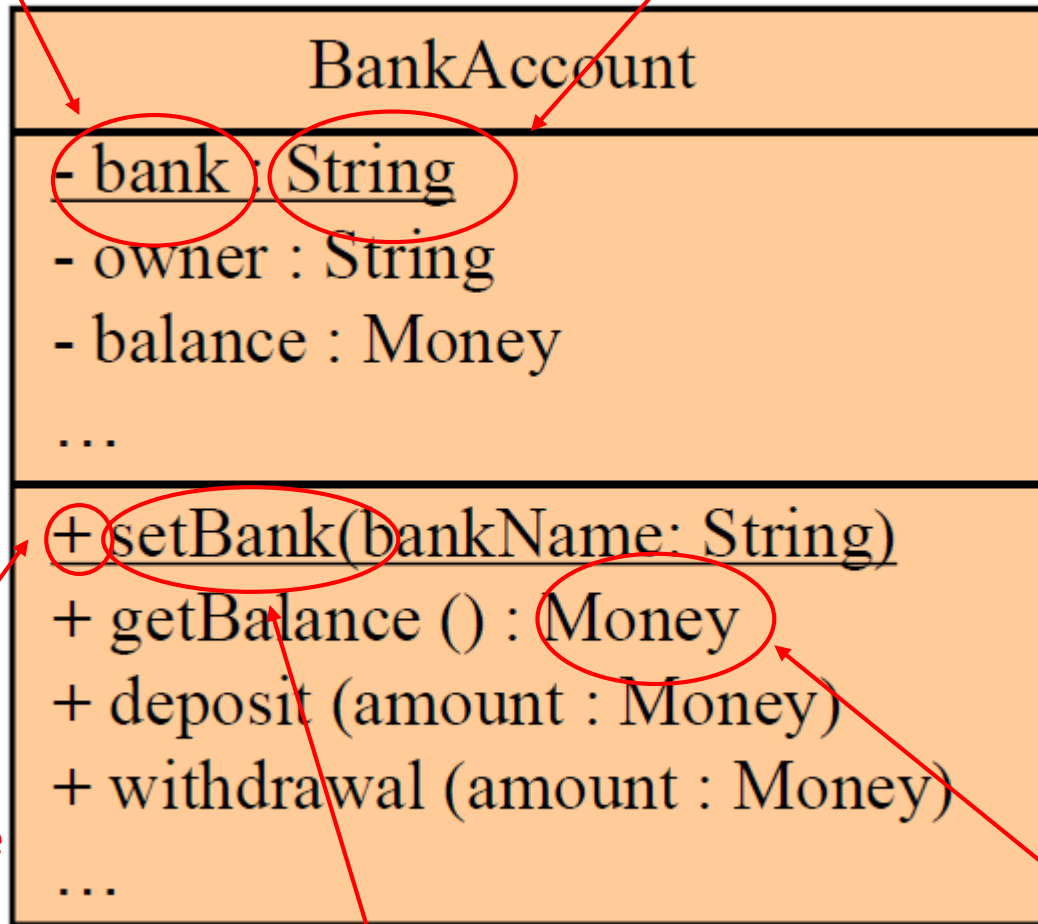
Another Example:

```
Student[] StudentList = new Student[10];
```



Data Type

Instance variables name



Modifier
+: Public
-: Private

Method Name

Return type

UML

Data Type

Instance variables name

Class Name

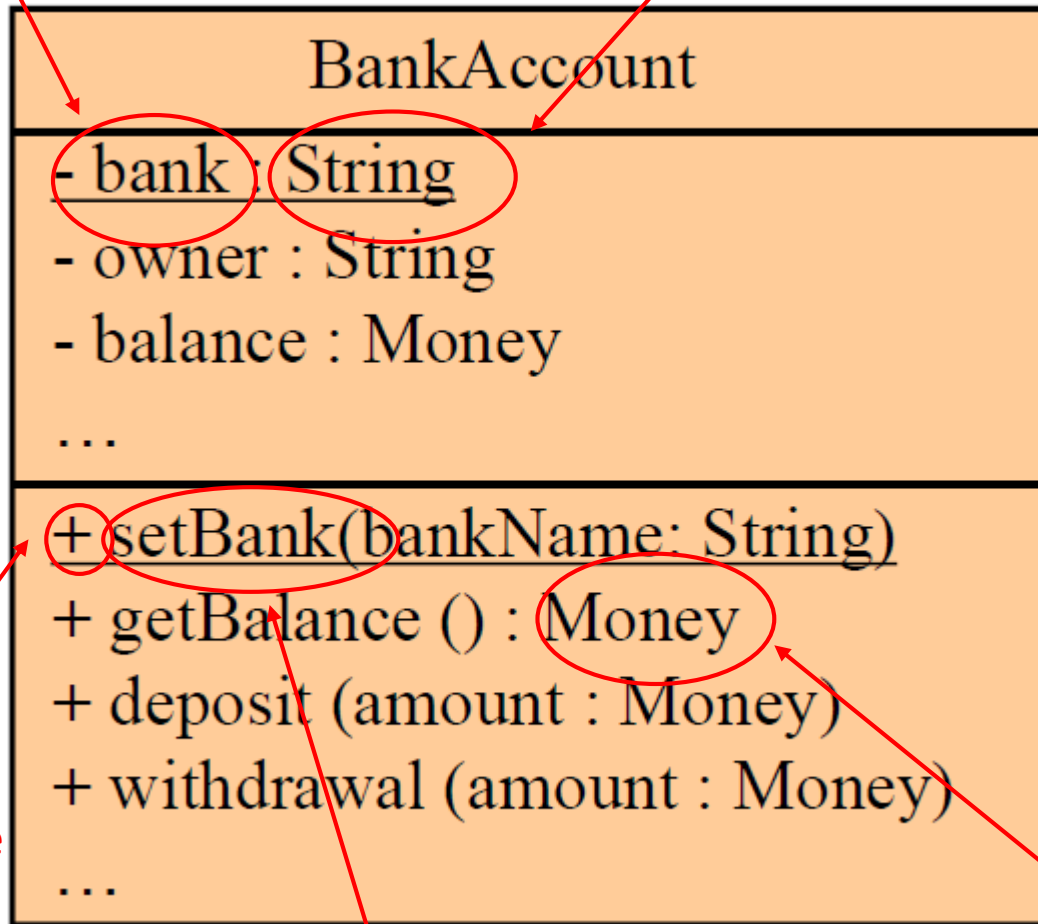
Instance Variables

Methods

Modifier
+: Public
-: Private

Method Name

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Demo for UML and Array

- We have two Class: **StSys** and **Student**
- **Student Class:**
 - Instance variables: Name, age
 - Methods: Constructor, getName, setName
- **StSys Class:**
 - Instance Variables: Student array (size 100)
 - Methods: Main methods , DisplayStudent, AddStudent

BankAccount
<ul style="list-style-type: none">- <u>bank : String</u>- owner : String- balance : Money...
<ul style="list-style-type: none">+ <u>setBank(bankName: String)</u>+ getBalance () : Money+ deposit (amount : Money)+ withdrawal (amount : Money)...