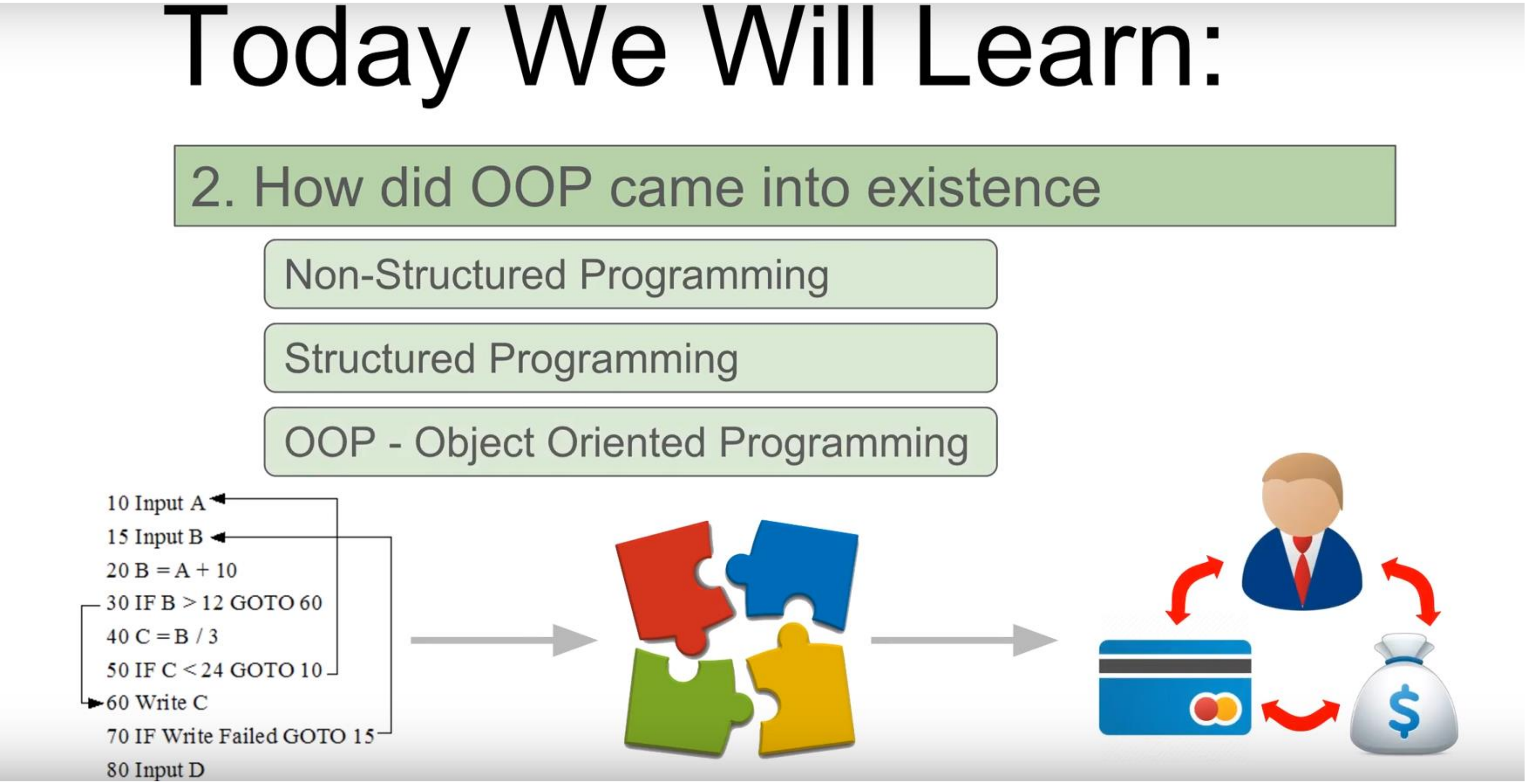
What is Object Oriented Programming (OOP)?



Today We Will Learn:

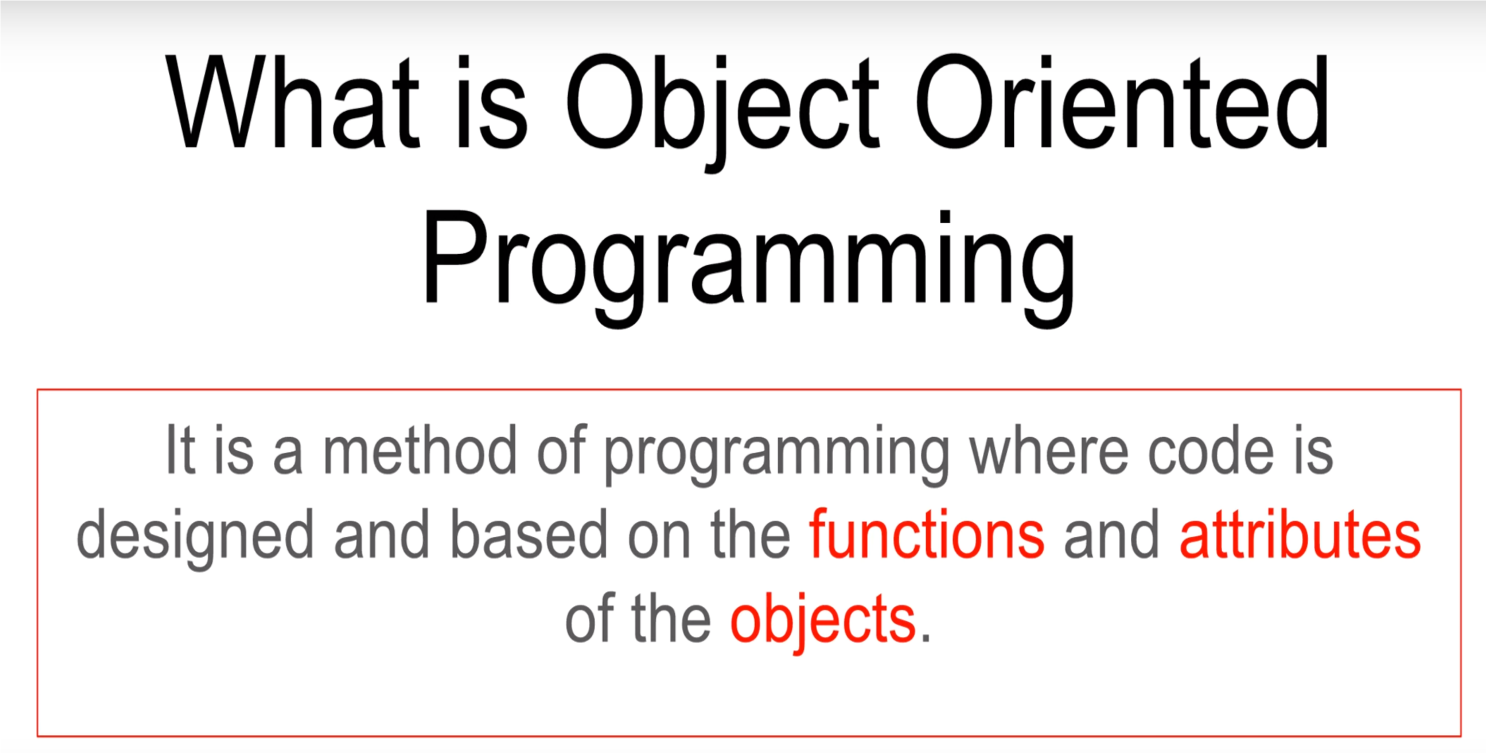
2. How did OOP came into existence

Non-Structured Programming

Structured Programming

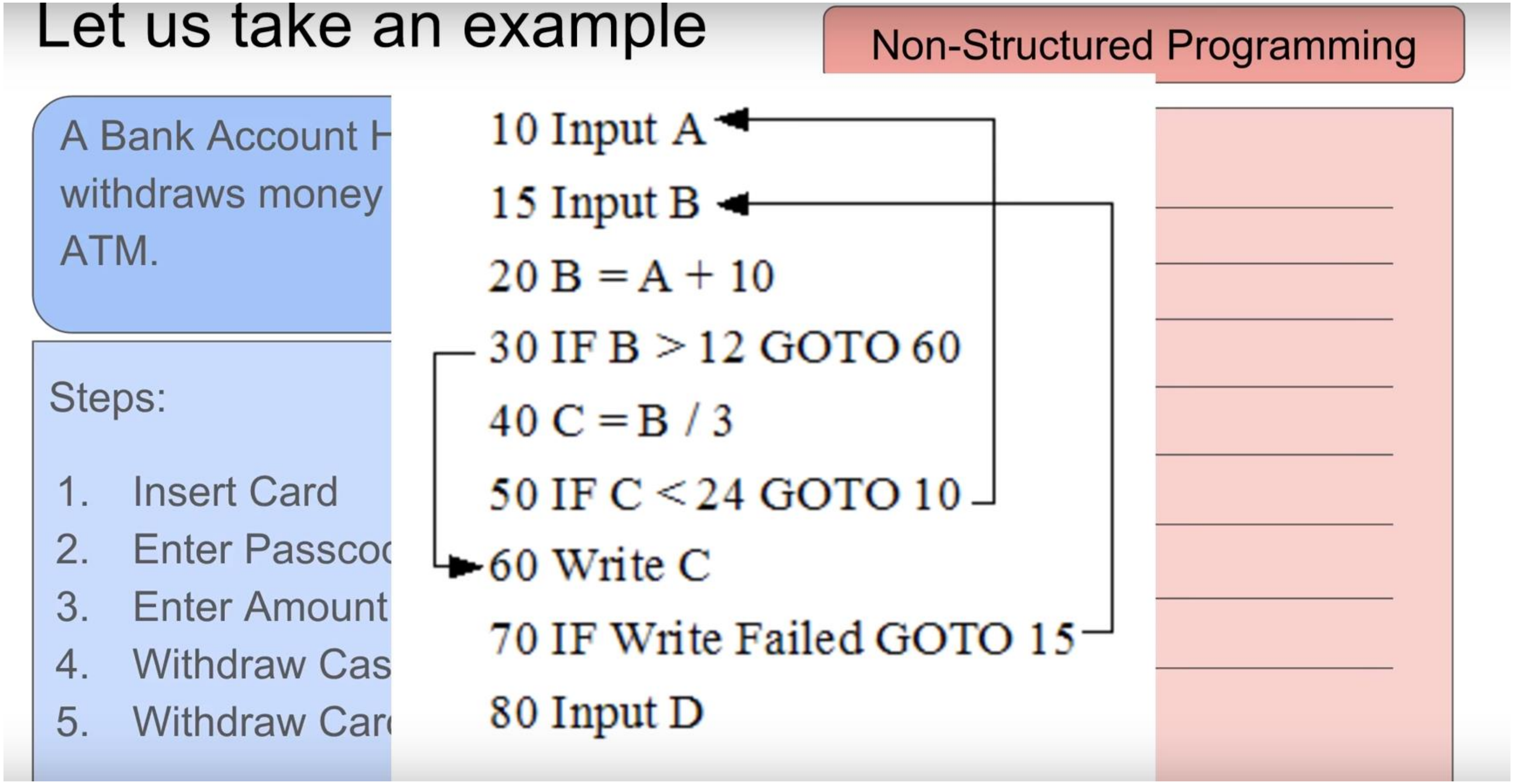
OOP - Object Oriented Programming

```
10 Input A
15 Input B
20 B = A + 10
30 IF B > 12 GOTO 60
40 C = B / 3
50 IF C < 24 GOTO 10
60 Write C
70 IF Write Failed GOTO 15
80 Input D
```



What is Object Oriented Programming

It is a method of programming where code is designed and based on the functions and attributes of the objects.



Let us take an example

Non-Structured Programming

A Bank Account H
withdraws money
ATM.

Steps:

1. Insert Card
2. Enter Passcod
3. Enter Amount
4. Withdraw Cas
5. Withdraw Car

```
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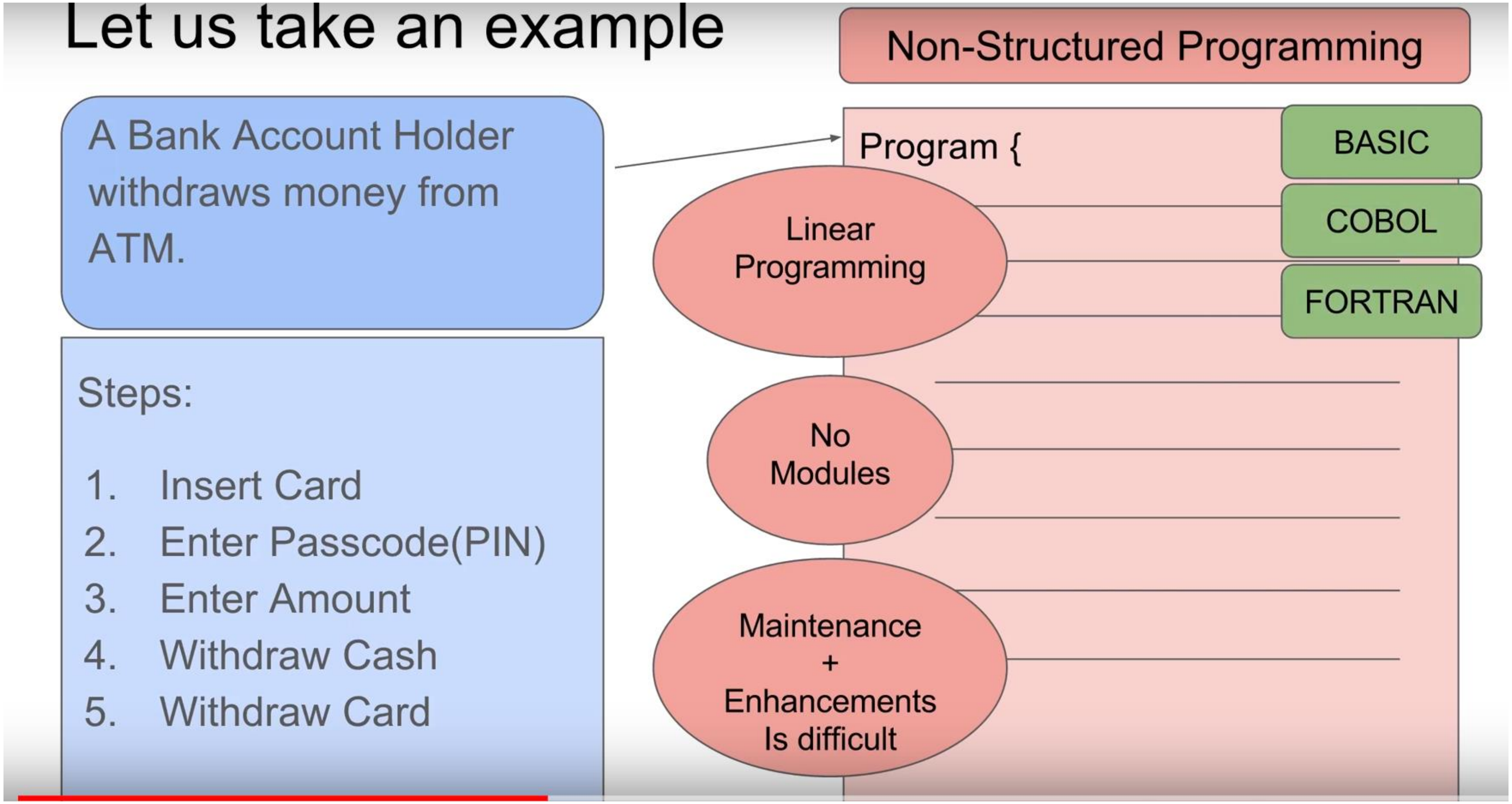


Let us take an example

A Bank Account Holder withdraws money from ATM.

Steps:

1. Insert Card
2. Enter Passcode(PIN)
3. Enter Amount
4. Withdraw Cash
5. Withdraw Card

Non-Structured Programming

Program {

BASIC

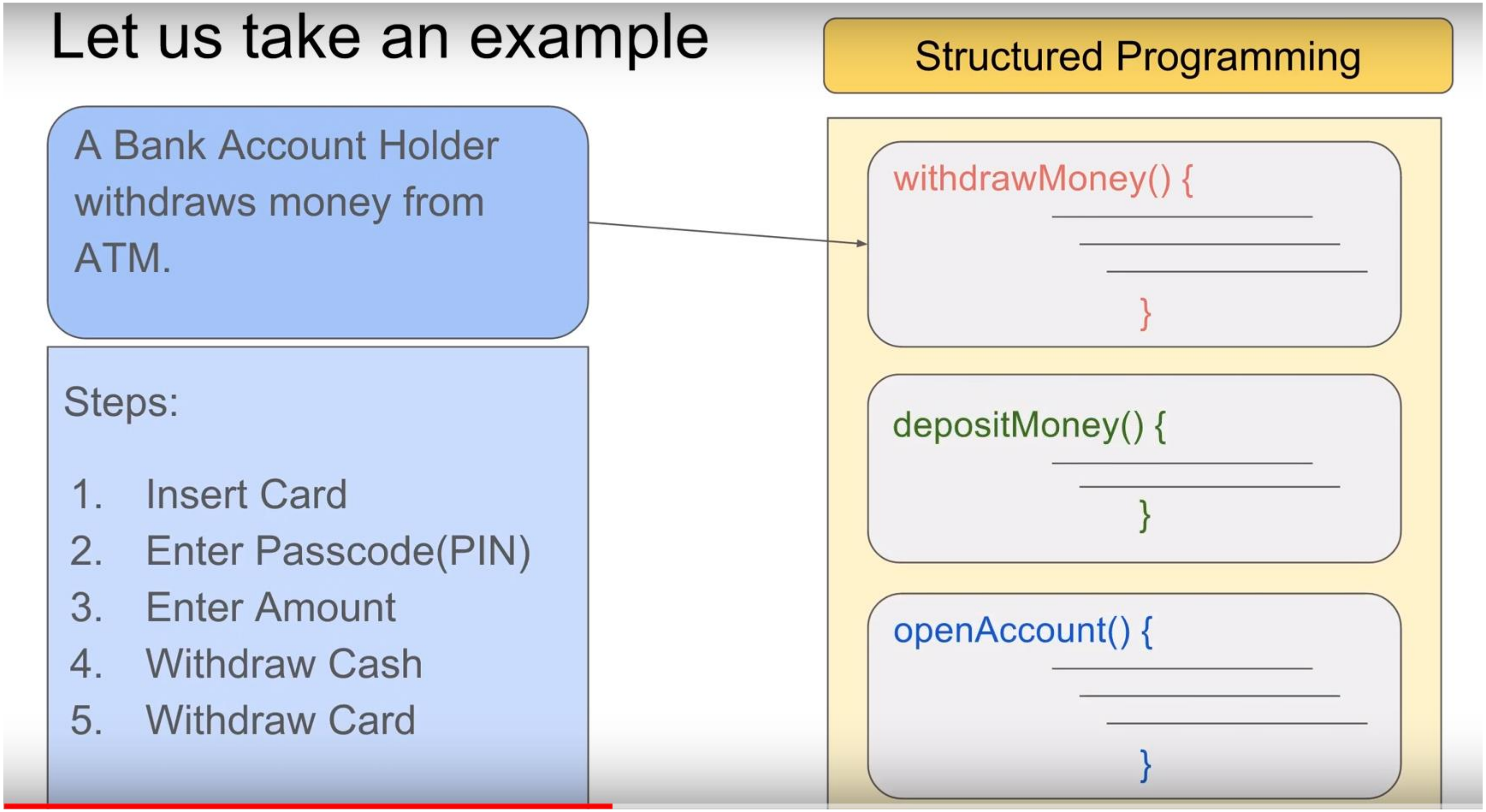
COBOL

FORTRAN

Linear Programming

No Modules

Maintenance + Enhancements Is difficult



Let us take an example

A Bank Account Holder withdraws money from ATM.

Steps:

1. Insert Card
2. Enter Passcode(PIN)
3. Enter Amount
4. Withdraw Cash
5. Withdraw Card

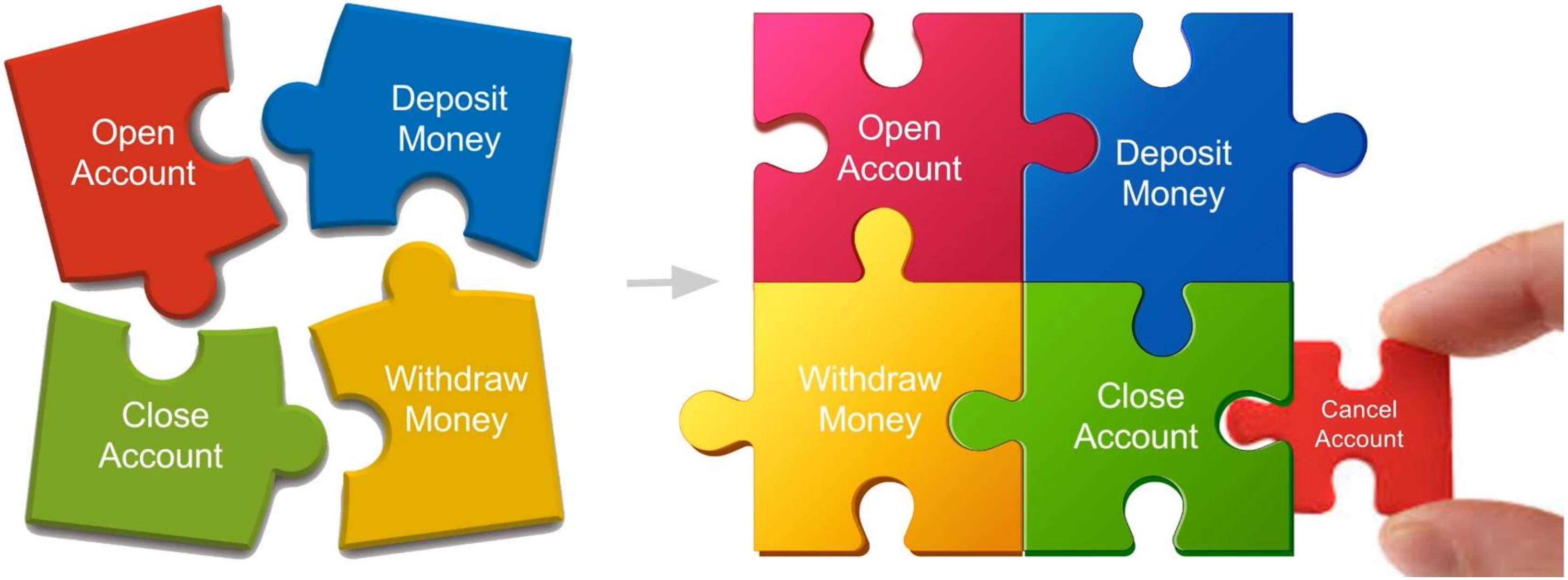
Structured Programming

```
withdrawMoney() {
}
```

```
depositMoney() {
}
```

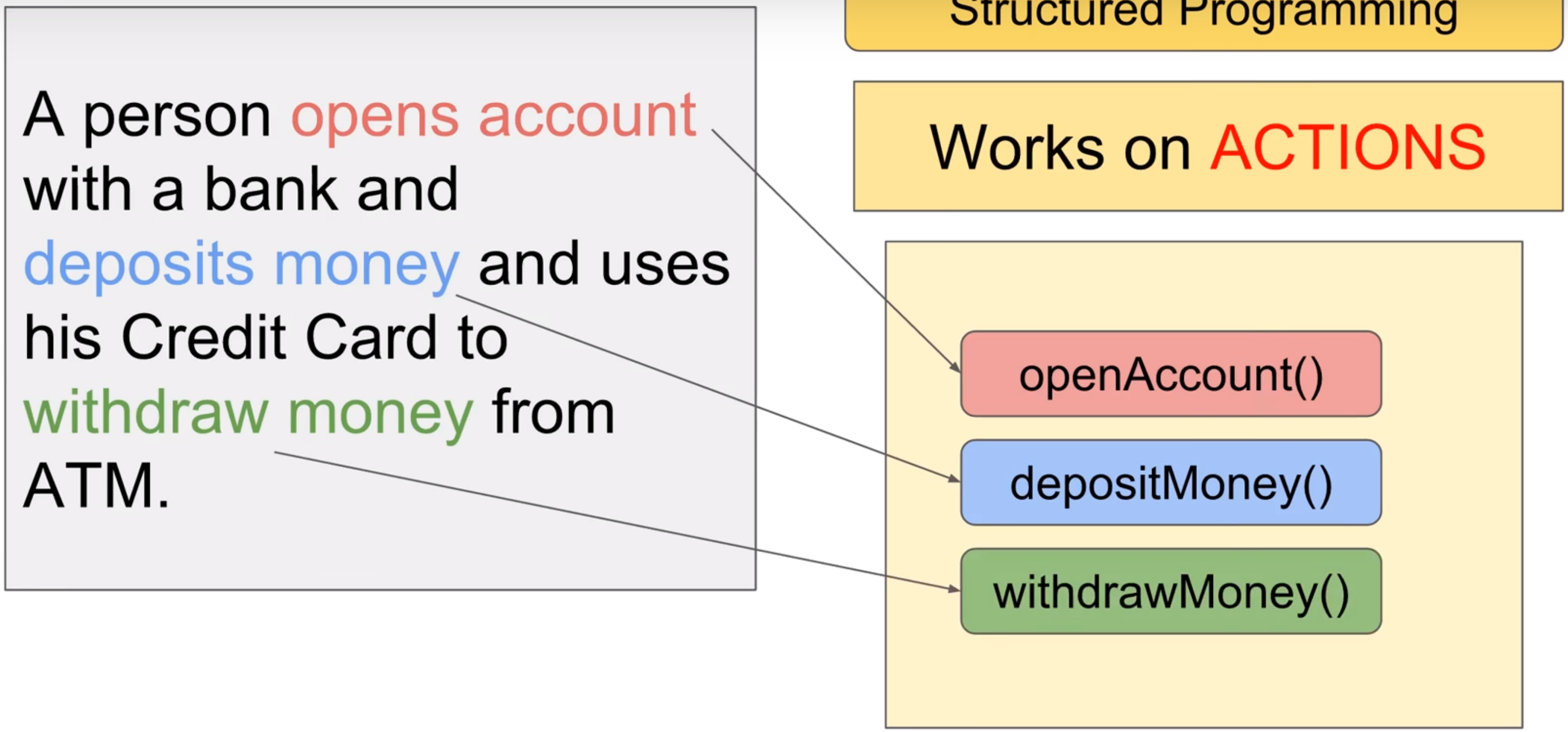
```
openAccount() {
}
```

Structured Programming

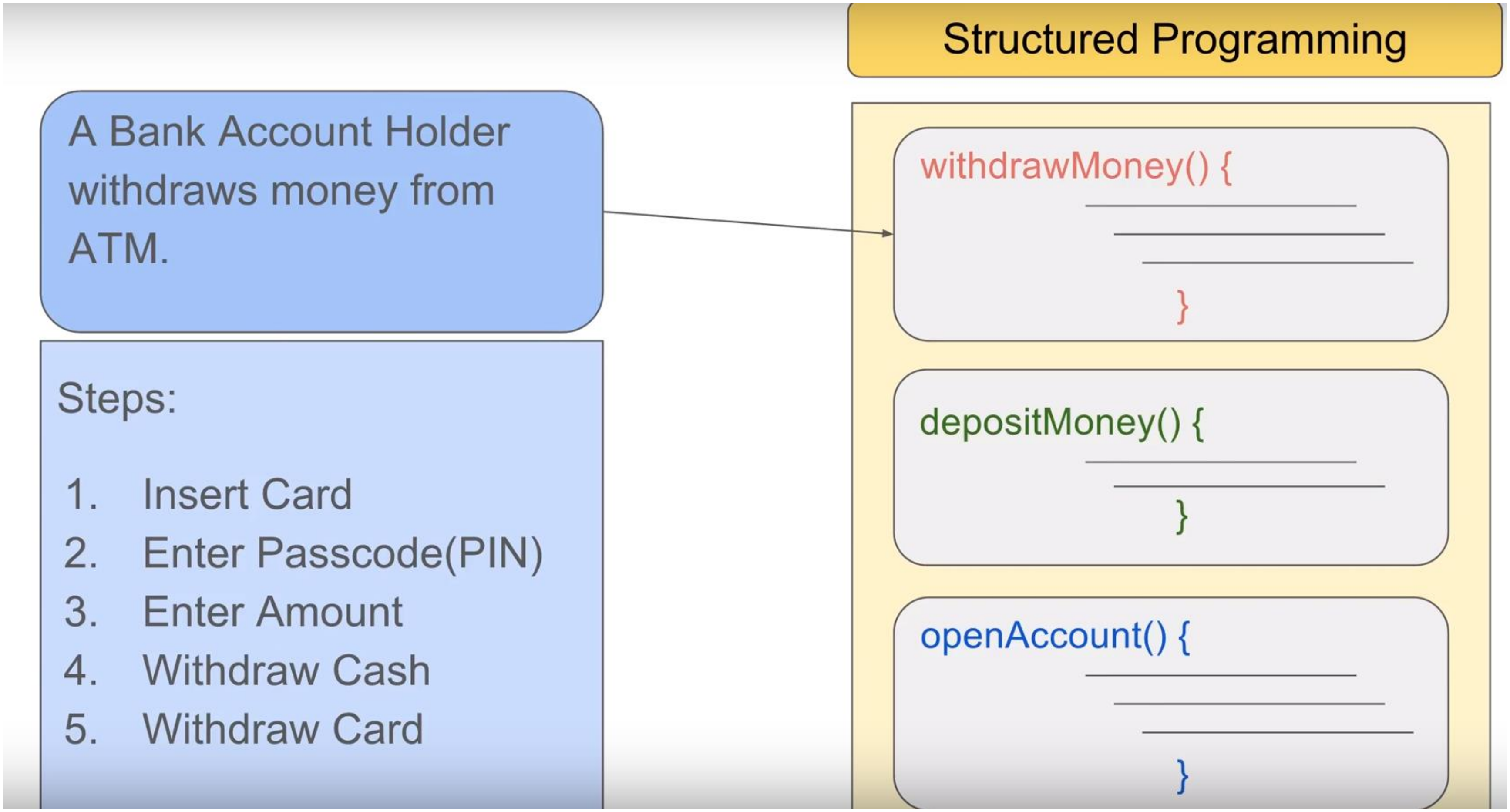


Structured Programming

Works on ACTIONS



A person opens account with a bank and deposits money and uses his Credit Card to withdraw money from ATM.



Structured Programming

A Bank Account Holder withdraws money from ATM.

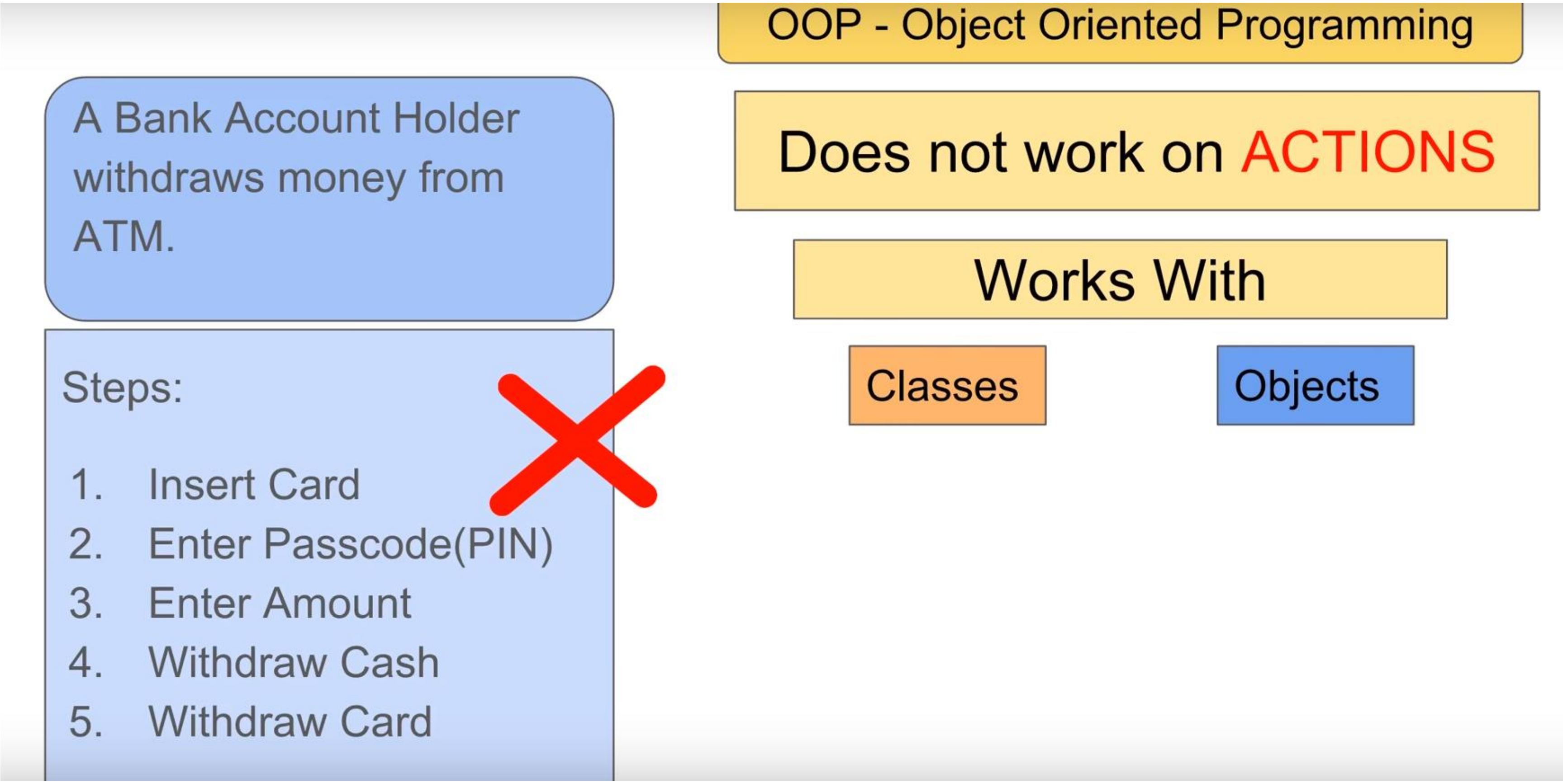
Steps:

1. Insert Card
2. Enter Passcode(PIN)
3. Enter Amount
4. Withdraw Cash
5. Withdraw Card

```
withdrawMoney() {
}
```

```
depositMoney() {
}
```

```
openAccount() {
}
```



OOP - Object Oriented Programming

A Bank Account Holder withdraws money from ATM.

Steps:

1. Insert Card
2. Enter Passcode(PIN)
3. Enter Amount
4. Withdraw Cash
5. Withdraw Card

Does not work on ACTIONS

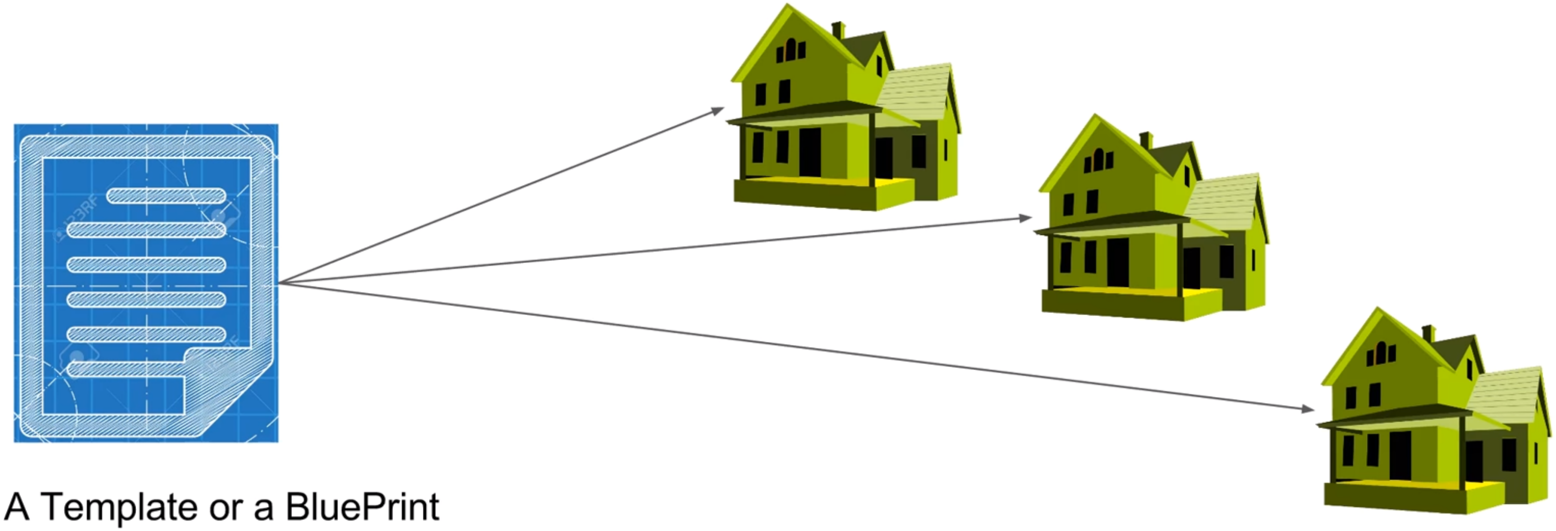
Works With

Classes

Objects

CLASS

OBJECTS



A Template or a BluePrint
for creating objects

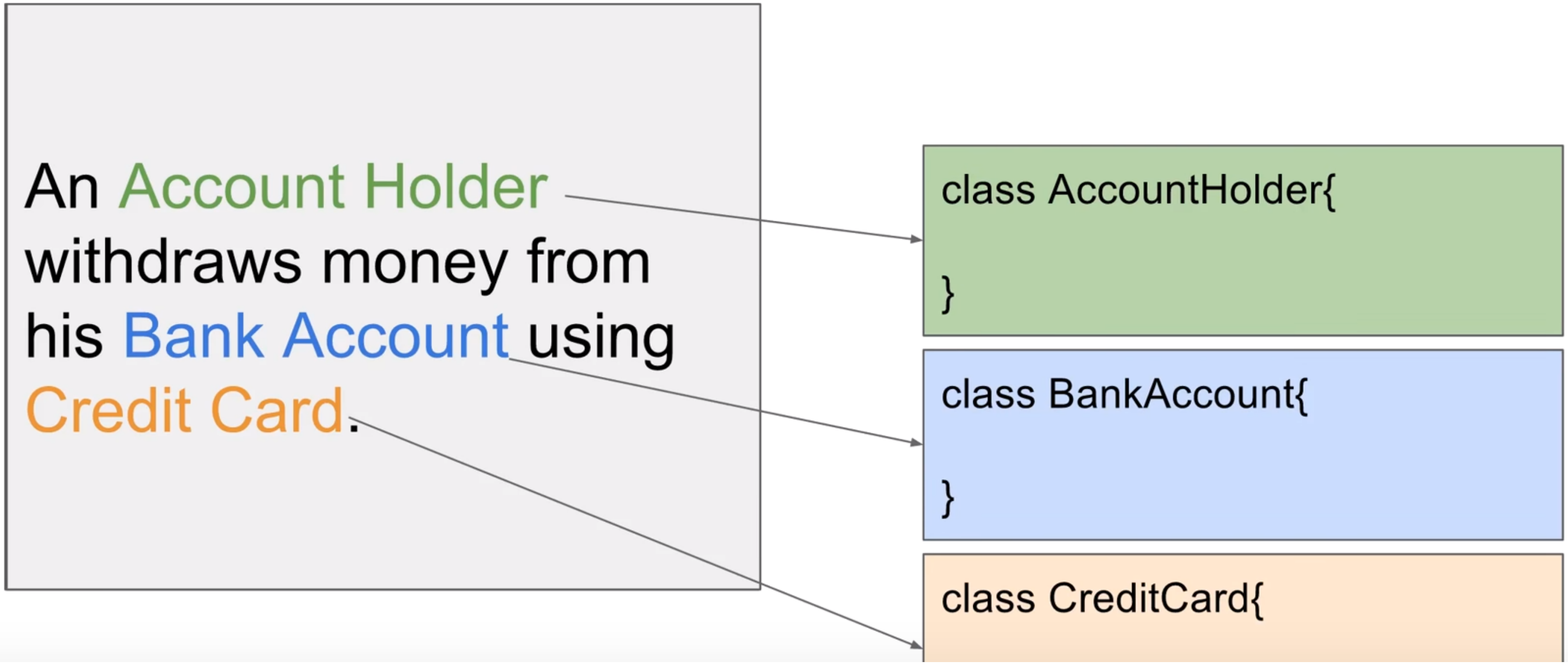
CLASS

OBJECTS

Object Oriented Programming is inspired by real life scenarios and depicts real life entities in the form of OBJECTS that are created using CLASSES.

A Template or a BluePrint for creating objects

OOP - Object Oriented Programming



An Account Holder withdraws money from his Bank Account using Credit Card.

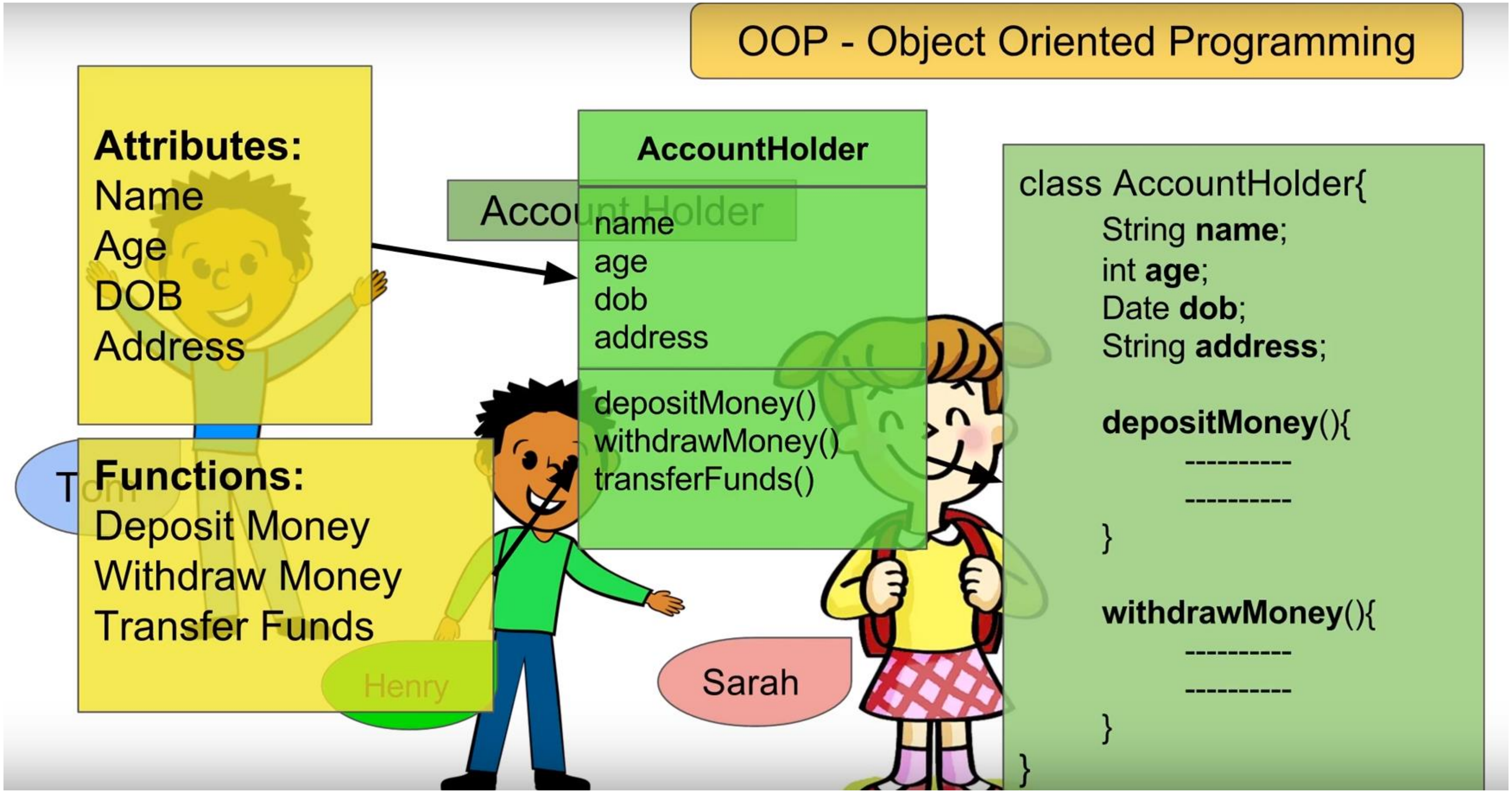
```
class AccountHolder{

}
```

```
class BankAccount{

}
```

```
class CreditCard{
```



OOP - Object Oriented Programming

Attributes:
Name
Age
DOB
Address

Functions:
Deposit Money
Withdraw Money
Transfer Funds

AccountHolder

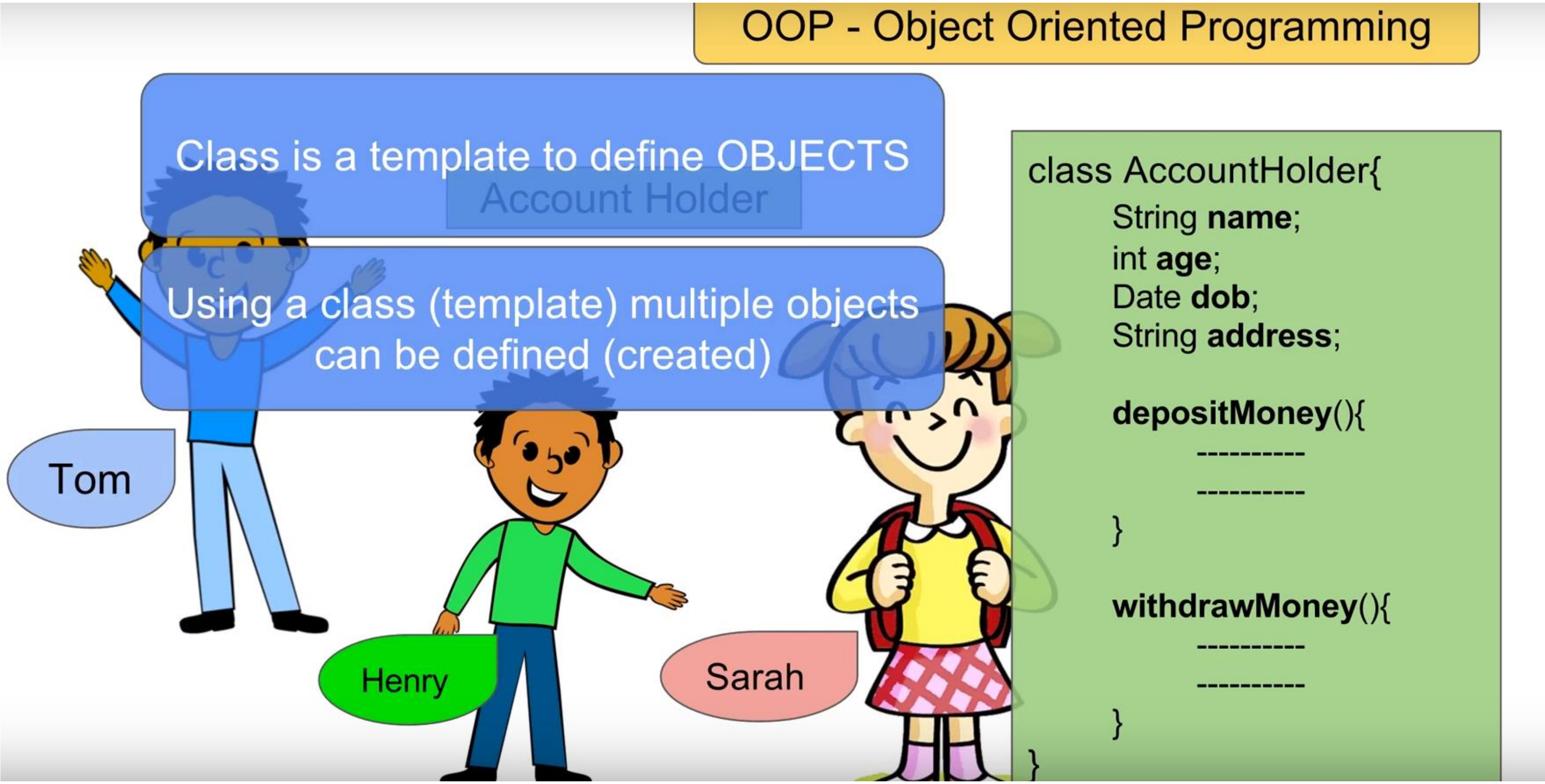
name
age
dob
address

depositMoney()
withdrawMoney()
transferFunds()

```
class AccountHolder{
        String name;
        int age;
        Date dob;
        String address;

        depositMoney(){
                ----------
                ----------
        }

        withdrawMoney(){
                ----------
                ----------
        }
}
```



OOP - Object Oriented Programming

Class is a template to define OBJECTS

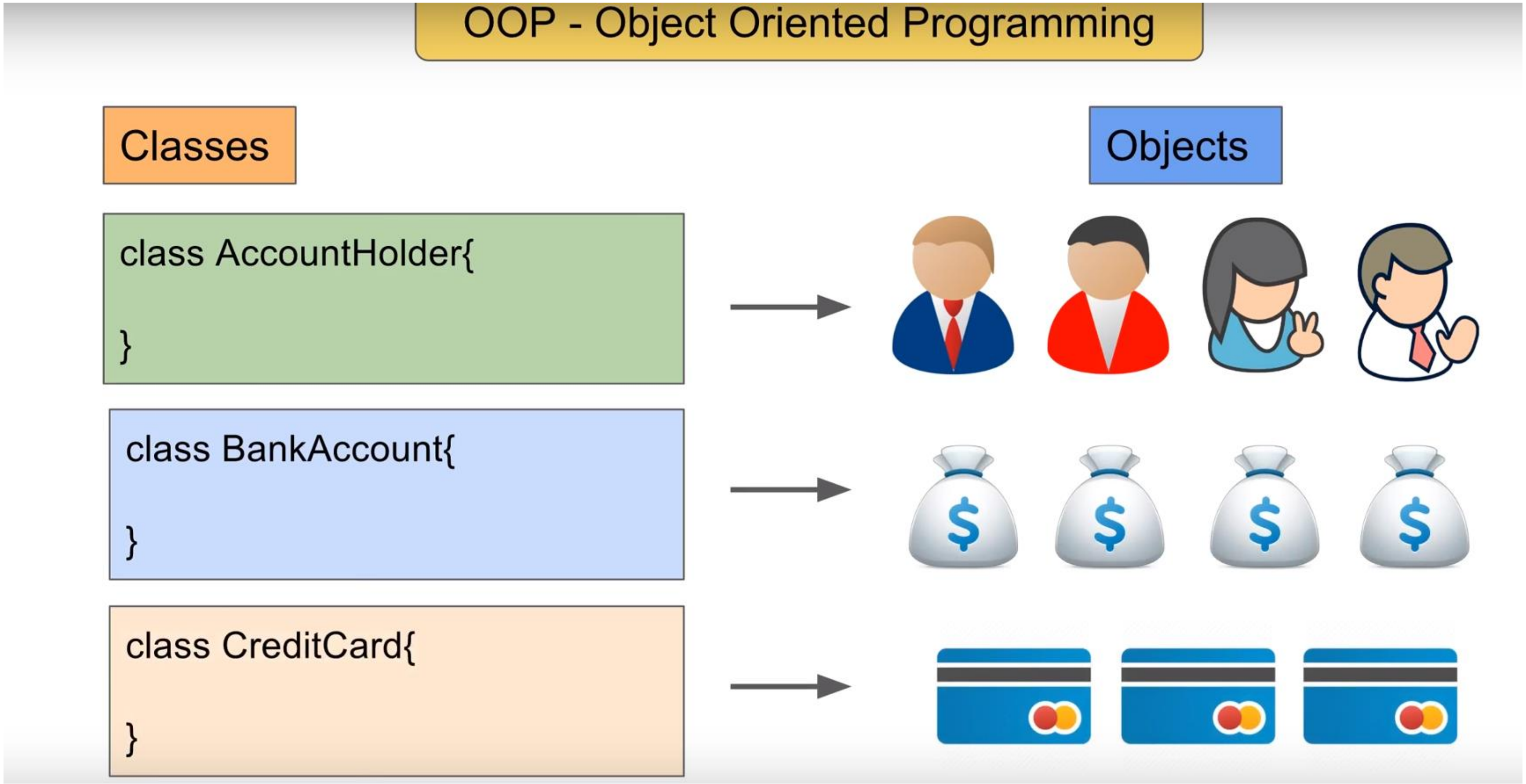
Account Holder

Using a class (template) multiple objects can be defined (created)

```
class AccountHolder{
        String name;
        int age;
        Date dob;
        String address;

        depositMoney(){
                ----------
                ----------
        }

        withdrawMoney(){
                ----------
                ----------
        }
}
```



OOP - Object Oriented Programming

Classes

Objects

```
class AccountHolder{

}
```

```
class BankAccount{

}
```

```
class CreditCard{

}
```