

Chapter 11

Write your own class



```
class Welcome{  
  
    public static void main(String[] args){  
        System.out.println("Welcome to suresh techs, I am learning Java.");  
        System.out.println("My name is suresh, I will get job soon");  
        System.out.println(1);  
        System.out.println(2);  
        System.out.println(3);  
        System.out.println(4);  
        System.out.println("\"Suresh techs\" is 5 star");  
    }  
}
```

D:\Java-SureshTechs>java Welcome

```
*  
**  
***
```

```
D:\Java-SureshTechs>java Welcome
Welcome to suresh techs, I am learning Java.
My name is suresh, I will get job soon
1
2
3
4
"Suresh techs" is 5 star
```

```
*  
**  
***  
****  
*****  
******  
*******  
********  
*****  
*****
```



SURESH TECHS
COLLEGE



Dashboard



Settings



Academic



HR/Payroll



Student



Finance



Library



Transport



Hostel



Messages/SMS



Store Management



Performance



Events



172

TOTAL STUDENTS



13

TOTAL EMPLOYEES



17

TOTAL COURSE



18

TOTAL BATCH



Activity



Schedule



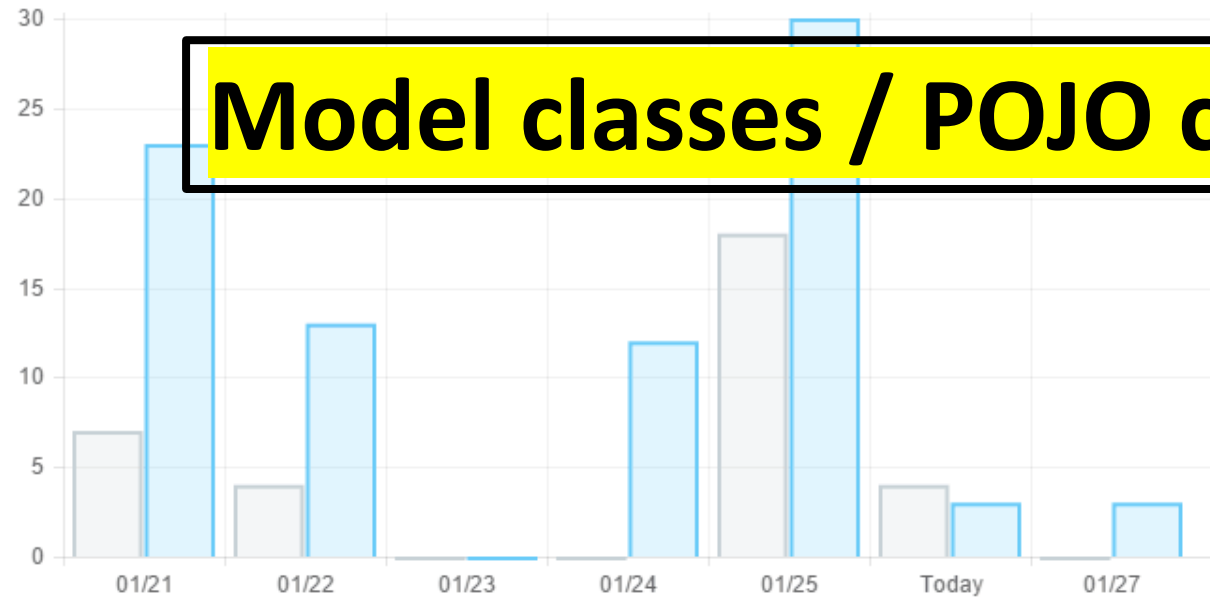
Fee reports



Support

Daily Attendance Overview

Employee Student



Model classes / POJO classes



1

Total
Admin Users



To do's

Subject

What's on your mind?



character

• ‘ ’

string

• “ ”

Characters (char)

char have **any but one character** (letters, numbers, symbols, space...)

char is represented using single quotes('a', ' ', '8', '&')

a	k	b	l	o	q	s	u	r	e	6	0
n	d	m	1	8	5	g	p	3	w	%	
t	f	i	7	9	\	j	?	\$	z)	
c	h	2	v	/	x	4	#	,	y	^	
-	+	!	<	(@	&	*	-	=		

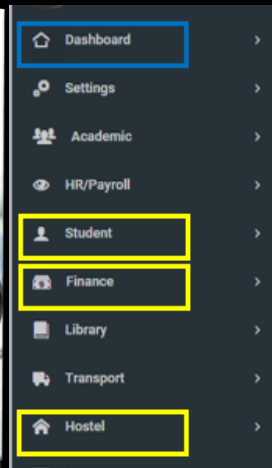
NOTE: `char` is a **primitive data type** whereas `String` is a **class** in java.

String?

Collection of characters

A String can have zero or more characters

String is represented using double quotes("sure", "a", "")



```
class Student{  
  
}
```

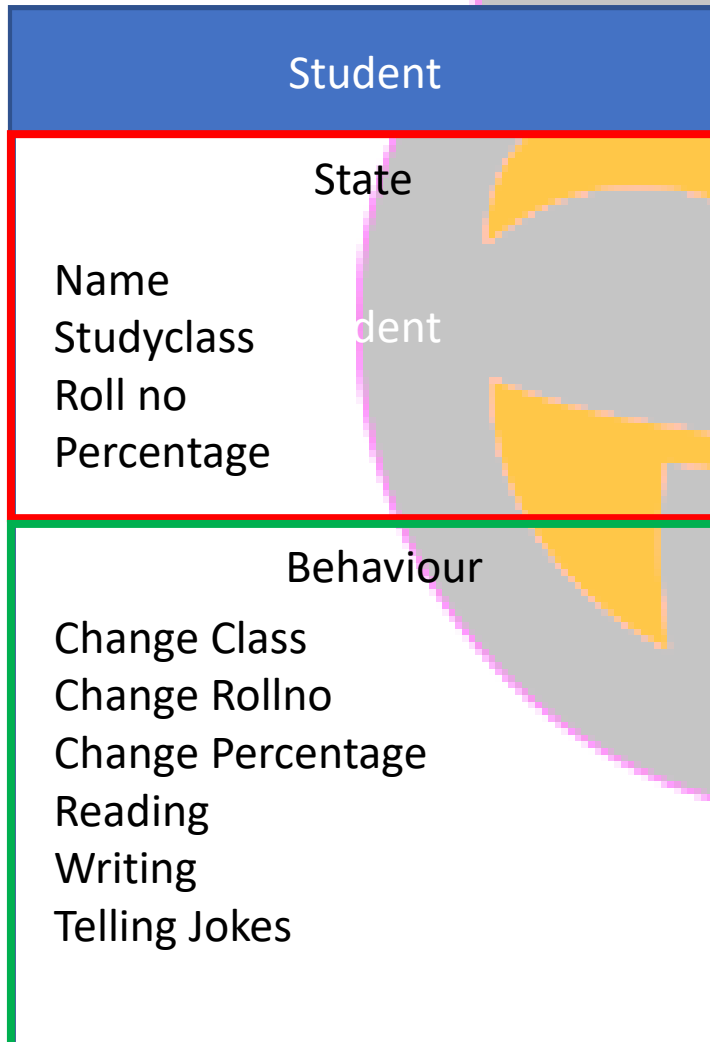
OBJECT → CLASS

↓
OBJECT IN PROGRAM

```
Student s1 = new Student();
```

Student

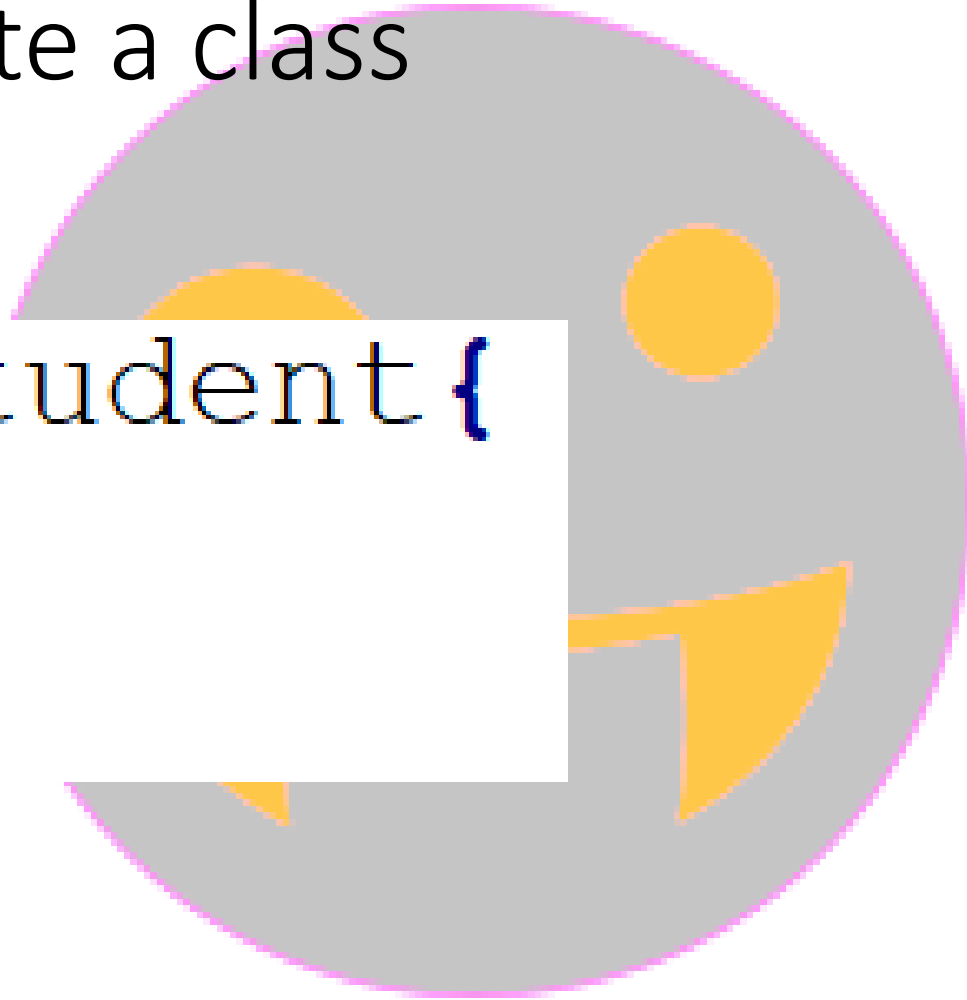
OBJECT



Let's create a class for the student


First let's write a class

```
class Student{  
  
}
```



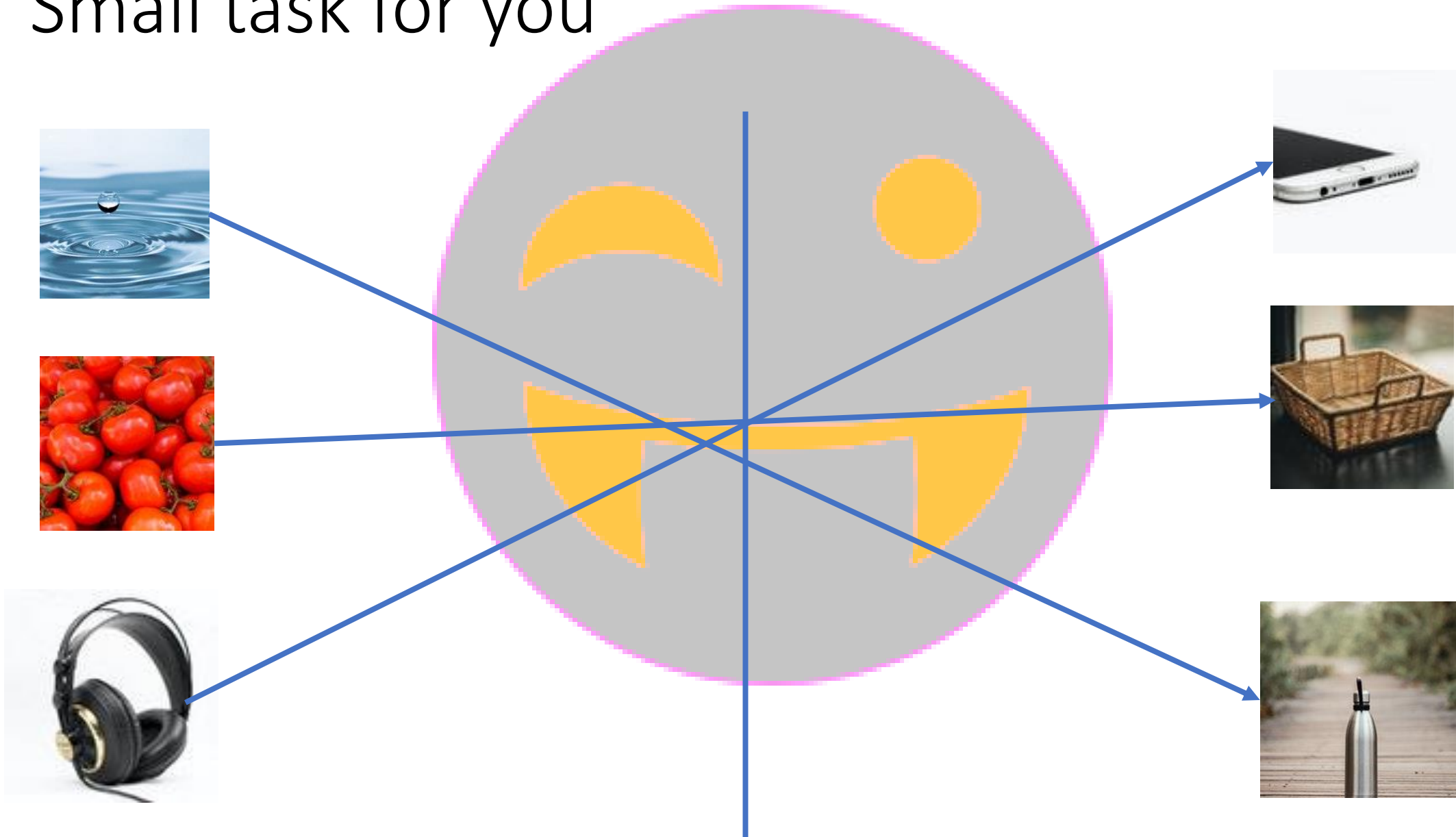
Define state

```
class Student{  
  name;  
  study class;  
  roll no;  
  percentage;  
}
```



```
Student.java:2: error: <identifier> expected  
name;  
^  
Student.java:3: error: <identifier> expected  
study class;  
^  
Student.java:3: error: <identifier> expected  
study class;  
^  
Student.java:5: error: <identifier> expected  
percentage;  
^  
4 errors
```

Small task for you

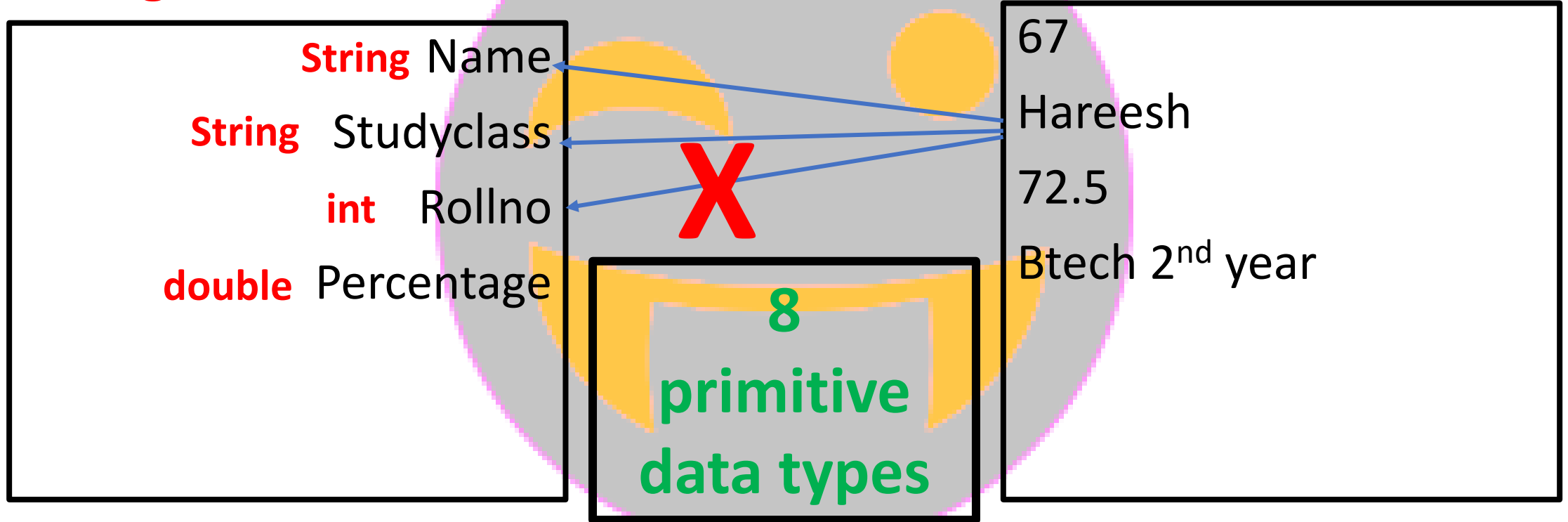


Another task



Specifying a type for the data

String is a class



We will learn so many (**byte, short, long, float, char, boolean**) such data types

Let's modify our class to have data types

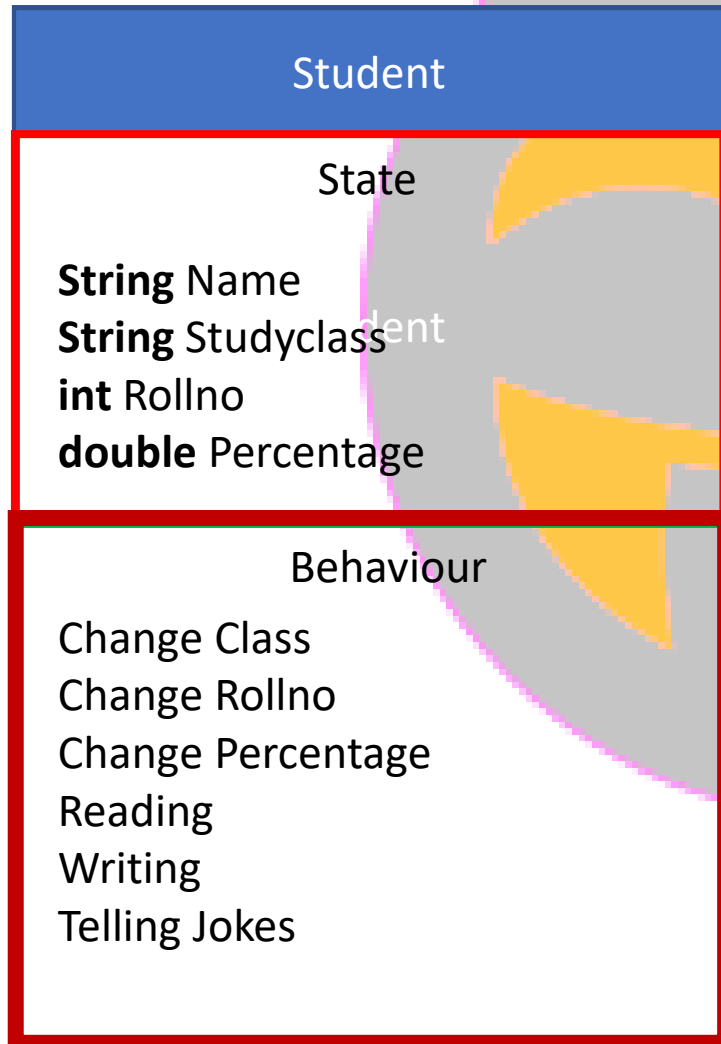
```
class Student{  
String name;  
String study class;  
int roll no;  
double percentage;  
}
```

```
Student.java:3: error: ';' expected  
String study class;  
      ^  
Student.java:3: error: <identifier> expected  
String study class;  
      ^  
Student.java:4: error: ';' expected  
int roll no;  
      ^  
Student.java:4: error: <identifier> expected  
int roll no;  
      ^  
4 errors
```

```
class Student{  
String name;  
String studyclass;  
int rollno;  
double percentage;  
}
```

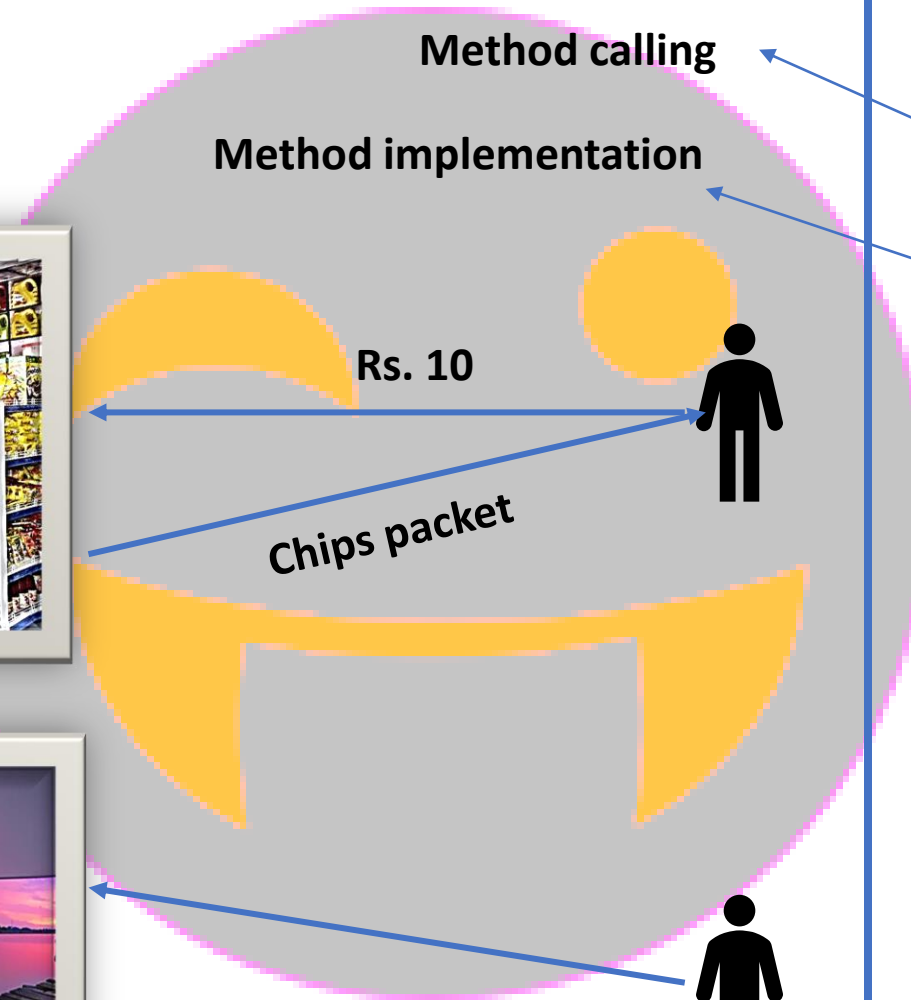
Let's remove spaces from variables

Student



Behaviour is represented in the form of the **methods**

method



```
class DailyActivities {  
    String item;  
    switchOnLight(    );  
  
    item = getChipsPacket( 10 );  
    String getChipsPacket(int rs) {  
        cashbox = 10;  
        return "lays packet"  
    }  
  
    void switchOnLight(    ){  
        System.out.println("Lights on");  
    }  
}
```

Student
<p>State</p> <p>String Name String Studyclass int Rollno double Percentage</p>
<p>Behaviour</p> <p>Change Class Change Rollno Change Percentage Reading Writing Telling Jokes</p>

Method implementations

```

void changeClass(String stdClass ) {
    Studyclass = stdClass;
}

void changeRollno( int rNum ) {
    Rollno = rNum;
}

```

Method calling/invocation

```

changeClass("Btech 2nd Year");
changeRollno(45);

```


Declaring a method

```
class Student{  
String name;  
String studyclass;  
int rollno;  
double percentage;
```

```
changeClass () {  
  
}
```

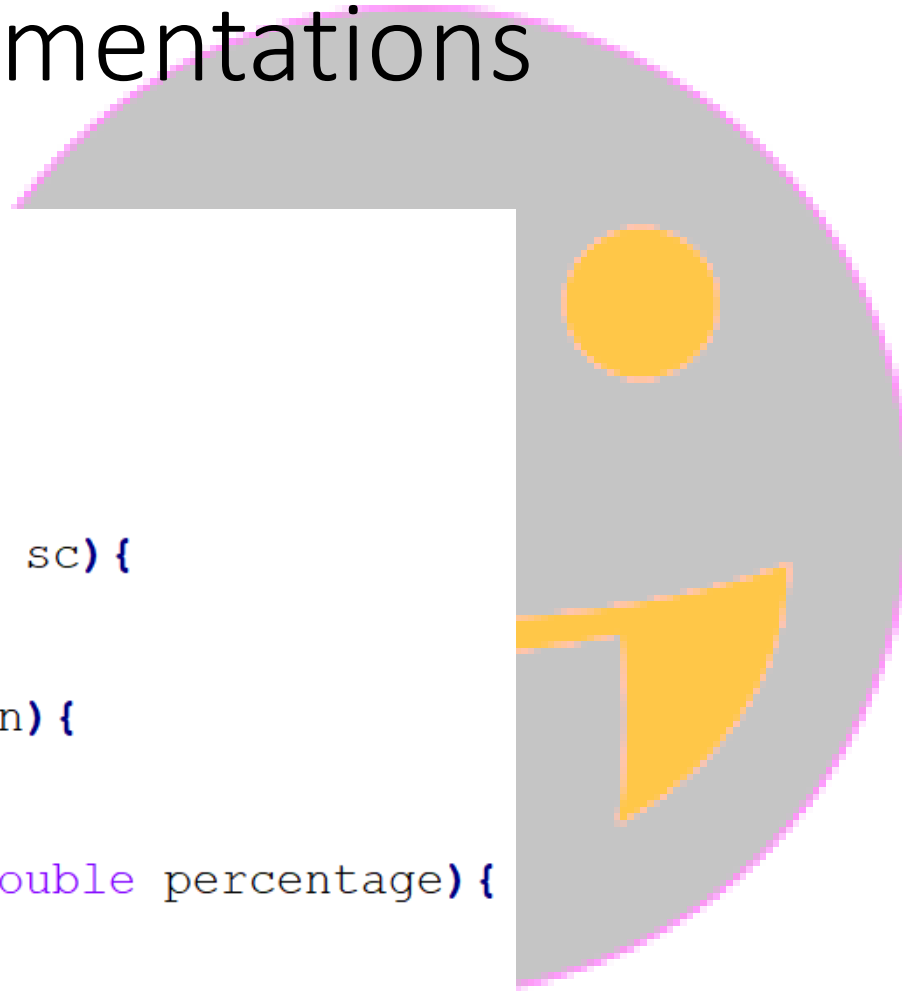
```
}
```

```
class Student{  
String name;  
String studyclass;  
int rollno;  
double percentage;  
  
void changeClass(String sc){  
  
}  
  
}
```

```
Student.java:7: error: invalid method declaration; return type required  
changeClass(){  
^  
1 error
```

Method implementations

```
class Student{  
    String name;  
    String studyclass;  
    int rollno;  
    double percentage;  
  
    void changeClass(String sc){  
  
    }  
    void changeRollno(int rn){  
  
    }  
    void changePercentage(double percentage){  
  
    }  
  
}
```



Getting student information

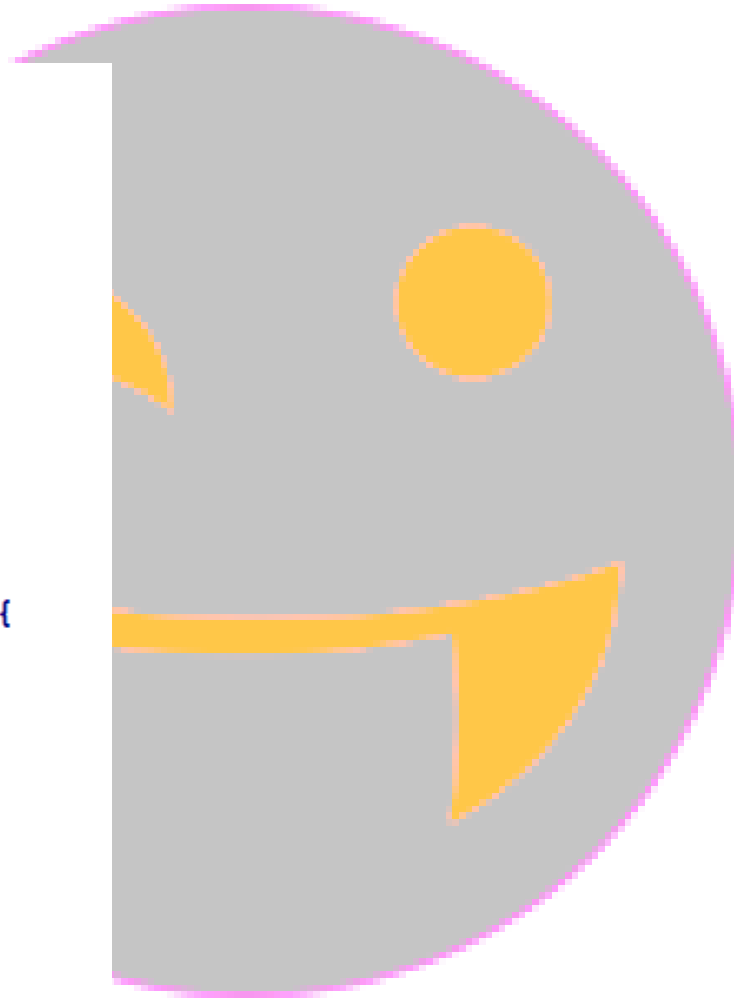
```
String getStudyClass() {  
  
}  
int getRollno() {  
  
}  
double getPercentage() {  
  
}
```

```
Student.java:19: error: missing return statement  
{  
>  
Student.java:22: error: missing return statement  
{  
>  
Student.java:25: error: missing return statement  
{  
>  
3 errors
```

```
String getStudyClass() {  
    return studyclass;  
}  
int getRollno() {  
    return rollno;  
}  
double getPercentage() {  
    return percentage;  
}
```

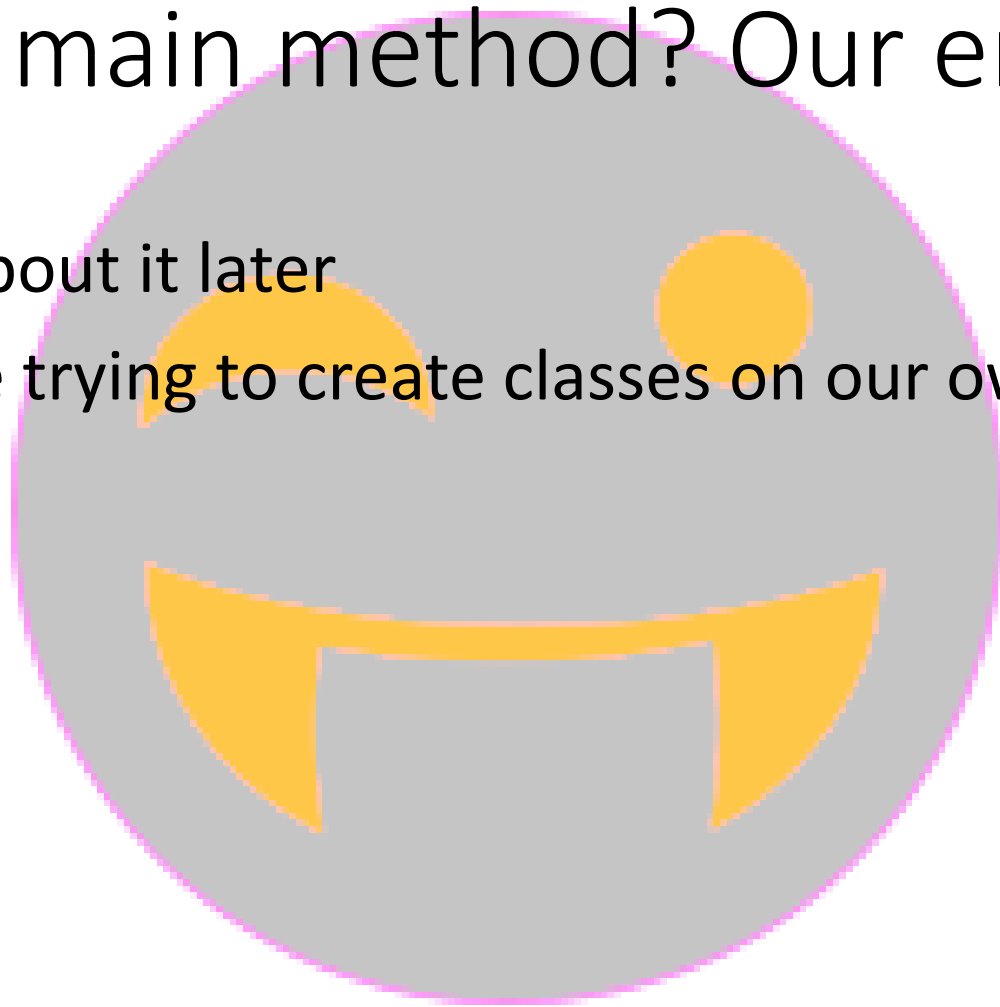
Let's change to setters(Model class)

```
class Student{  
    String name;  
    String studyclass;  
    int rollno;  
    double percentage;  
  
    void setStudyClass(String sc){  
  
    }  
    void setRollno(int rn){  
  
    }  
    void setPercentage(double percentage){  
  
    }  
  
    String getStudyClass(){  
        return studyclass;  
    }  
    int getRollno(){  
        return rollno;  
    }  
    double getPercentage(){  
        return percentage;  
    }  
}
```



What about main method? Our entry point?

- We will discuss about it later
- As of now, we are trying to create classes on our own
- Final task for you



Write class a for **House**

- Try on your own



```
class House{
    String houseNumber;
    double areaInSquareFeets;
    String paint;
    int numberOfRooms;

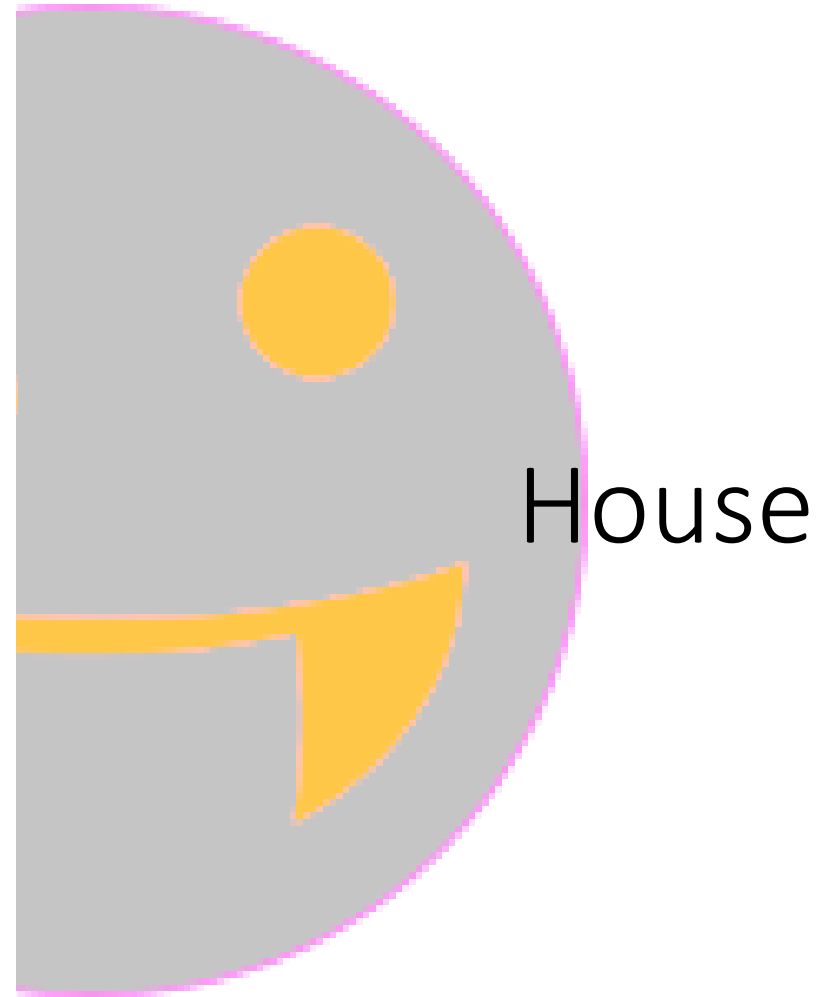
    void houseNumber(String dn){
    }

    void setAreaInSquareFeets(double area){
    }

    void setPaint(String paint){
    }

    void setNumberOfRooms(int nOfRooms){
    }

    String getHouseNumber(){
        return houseNumber;
    }
    double getAreaInSquareFeets(){
        return areaInSquareFeets;
    }
    String getPaint(){
        return paint;
    }
    int getNumberOfRooms(){
        return numberOfRooms;
    }
}
```



Java World

- Now, you are in **Java world**, find the **objects** where ever you go, **write classes for those object.**
- I mean just **think** about the **state of that object** so that you can write **getters and setters** for that class
- POJO(**P**lain **O**ld **J**ava **O**bject)
 - A class which has no business logic and provides object representation without any behaviour
- Model

What is a class?

- Class is a **blueprint** to create **object/objects**
- **Why should I create objects**, what can I do with objects?
- Let's understand more about **Identifiers, Variables & Data types**
- Will come back to **Student and House class later**



What next?

Identifiers



చిన్న బ్రేక్ చిటికలో వచ్చేస్తా