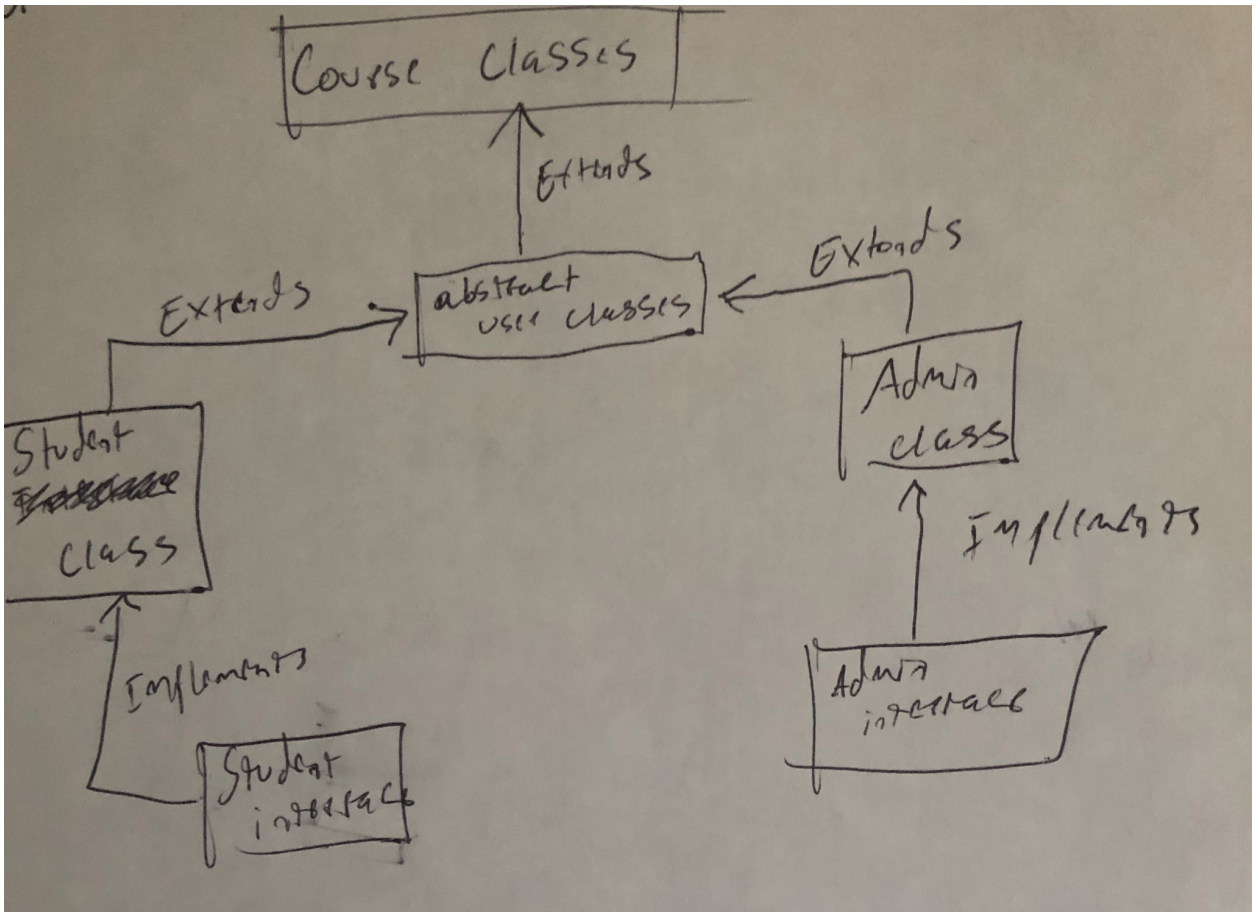
My program could be interpreted as having two separate sides. One part of the code that works on the requirements for the admin and the other part that works on the requirements for the student. Both of these two parts of the code extend the User class, and the user class extends Course. This can be better explained in the diagram attached.

- Method overloading
  - Method overloading is changing the parameter list being the type of parameter or the quantity of parameters. In my program I didn't use any examples of method overloading.
- Method overriding (at least two examples)
  - Method overriding is changing the behavior of an inherited method. I use method overriding several times in my code, for example: methods used in studentInterface class and student class.

```
@Override
	public void viewAvailableCourses() {
		for (int i = 0; i < courseList.size(); i++) {
			if (courseList.get(i).getCurrentStudents() != courseList.get(i).getMaxStudents()){
				courseList.get(i).studentPrint();
			}
		}
	}
```

- Abstract Class
  - User is an abstract class which defines a set of methods and attributes that are shared in the derived classes. Example: User class is an abstract class.
- Inheritance
  - Inheritance permits a class to utilize the public methods and attributes that have been previously defined in the base class. This can be seen all around the program, example: abstract class User extends Course.
- Polymorphism
  - Polymorphism refers to having methods that change behavior depending on the class. Polymorphism is present in the program, example: object user can take two forms admin and user.
- Encapsulation
  - Encapsulation is the process of wrapping code and data together into a single unit. We can create a fully encapsulated class in Java by making all the data members of the class private. In my program I don't have any private variables.
- The concept of ADT (Abstract Data Types)
  - Abstract data types can be looked at as a special data type that is composed of a set of values and a set of operations of a declared type. One form of ADT used in my code is ArrayLists.


Course Classes
Extends
Extends
abstract user classes
Extends
Student class
Admin class
Implements
Implements
Student interface
Admin interface