Universidad de las Fuerzas Armadas ESPE

Object Oriented Programming

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Homework #12

Topic: Inheritance

SuperClass

```java
package ec.edu.espe.dailyDev.model;

import com.google.gson.reflect.TypeToken;
import static ec.edu.espe.dailyDev.model.Administrator.loginAdmin;
import static ec.edu.espe.dailyDev.model.Developer.loginDev;
import ec.edu.espe.dailyDev.utils.FileHandler;
import ec.edu.espe.dailyDev.utils.PasswordHandler;
import java.lang.reflect.Type;
import java.util.ArrayList;
import java.util.UUID;

/**
 *
 * @author Team Number: 4 - CodingNinjas
 */

public class User {

    private final UUID id;
    private String username;
    private final String encryptedPassword;
    private ArrayList<Task> assignedTasks;
    static User currentUser;

    @Override
    public String toString() {
        return "User{" + "id=" + id + ", username=" + username + ", encryptedPassword=" + encryptedPassword + ", assignedTasks=" + assignedTasks + '}';
    }

    public User(String username, String password) {
        this.id = UUID.randomUUID();
        this.username = username;
        this.encryptedPassword = PasswordHandler.encryptPassword(password);
    }
```

SubClasses

```java
public class Developer extends User {

    public static User login(String username, String password) {
        throw new UnsupportedOperationException(message:"Not supported yet."); // Generated from nbf
    }

    private final String role = "developer";
    private final UUID organizationCode;

    public Developer(String username, String password, UUID organizationCode) {
        super(username, password);
        this.organizationCode = organizationCode;

    }

    @Override
    public String toString() {
        return "Developer{" + "role=" + role + ", organizationCode=" + organizationCode + '}';
    }
}
```

```java
public class Administrator extends User {

    private final String role = "admin";
    private final UUID organizationCode;

    public Administrator(String username, String password, UUID orgCode) {
        super(username, password);
        this.organizationCode = orgCode;

    }

    @Override
    public String toString() {
        return "Admin{" + "role=" + role + ", organizationCode=" + organizationCode + '}';
    }
}
```

UML Diagram

User

-id : UUID
-username : string
-encryptedPassword : string
-assignedTasks : ArrayList<Task>

+getId() : UUID
+setId(id : UUID) : void
+getUsername() : string
+setUsername(username : string) : void
+getEncryptedPassword() : string
+setEncryptedPassword(encryptedPassword : string) : void
+getAssignedTasks() : ArrayList<Task>
+setAssignedTasks(assignedTasks : ArrayList<Task>) : void

Developer

-role : string
-organizationCode : UUID

+loginAdmin(username : string, password : string)
+registerDev(username : string, password : string, organizationCode : UUID)

Administrator

-role : string
-organizationCode : UUID

+loginAdmin(username : string, password : string)
+registerAdmin(username : string, password : string, organizationCode : UUID)