# UNIVERSIDAD DE LAS FUERZAS ARMADAS ESPE

**CLASS NAME:** OBJECT ORIENTED PROGRAMMING

**TEACHER:** EDISON LASCANO

NRC:14575

**HOMEWORK #:** 4

TOPIC: ProjectModeling

**NAME:** CARLOS ÑATO

| NAME | Selected (✅) | Not selected (✖) |
|---|---|---|
| 1. Task | ✅ | |
| 2. Users | ✅ | |
| 3. Types of tasks | ✅ | |
| 4. Reminders | ✅ | |
| 5. Daily messages | ✅ | |
| 6. Daily Agenda | | ✖ |
| 7. Calendar | | ✖ |
| 8. Reporting | | ✖ |
| 9. Graphs | | ✖ |
| 10. Challenges | | ✖ |
| 11. Notifications | ✅ | |
| 12. System | | ✖ |
| 13. Creation Date | | ✖ |
| 14. Specific Projects | | ✖ |
| 15. Phases | | ✖ |
| 16. Priorities | | ✖ |
| 17. Workflow | | ✖ |
| 18. Projects | ✅ | |
| 19. Stats | ✅ | |
| 20. Final Task | | ✖ |
| 21. Task | | ✖ |
| 22. Integration | | ✖ |
| 23. Daily Status | | ✖ |

| | | |
|---|---|---|
| 24. Methodologies | | ✗ |
| 25. Teams | | ✗ |
| 26. Roles | ✅ | |
| 27. Individuals | | ✗ |
| 28. Organizations | ✅ | |
| 29. Management applications | | ✗ |
| 30. Graph | | ✗ |

**Code:**

```java
public class Stats {
    private int totalTasks;
    private int completedTasks;
    private int overdueTasks;
    private int highPriorityTasks;
    private double completionRate;

    public Stats(int totalTasks, int completedTasks, int overdueTasks, int highPriorityTasks) {
        this.totalTasks = totalTasks;
        this.completedTasks = completedTasks;
        this.overdueTasks = overdueTasks;
        this.highPriorityTasks = highPriorityTasks;
    }

    public int getTotalTasks() {
        return totalTasks;
    }

    public int getCompletedTasks() {
        return completedTasks;
    }

    public int getOverdueTasks() {
        return overdueTasks;
    }

    public int getHighPriorityTasks() {
        return highPriorityTasks;
    }
}
```

```java
import java.util.Date;

public class Notification {
    private String notificationID;
    private String sender;
    private String message;
    private Date timestamp;

    public Notification(String notificationID, String sender, String message) {
        this.notificationID = notificationID;
        this.sender = sender;
        this.message = message;
        this.timestamp = new Date();
    }

    public String getNotificationID() {
        return notificationID;
    }

    public String getSender() {
        return sender;
    }

    public String getMessage() {
        return message;
    }

    public Date getTimestamp() {
        return timestamp;
    }
}
```

```java
import java.util.Date;

public class Task {
    private String taskID;
    private String title;
    private String description;
    private Date dueDate;
    private int priority;
    private String status;
    private User assignee;

    public Task(String taskID, String title, String description, Date dueDate, int priority, String status, User assignee) {
        this.taskID = taskID;
        this.title = title;
        this.description = description;
        this.dueDate = dueDate;
        this.priority = priority;
        this.status = status;
        this.assignee = assignee;
    }

    public String getTaskID() {
        return taskID;
    }

    public String getTitle() {
        return title;
    }

    public String getDescription() {
        return description;
    }

    public Date getDueDate() {
        return dueDate;
    }
}
```

```java
import java.util.ArrayList;
import java.util.List;

public class User {
    private String userID;
    private String username;
    private String password;
    private List<Task> assignedTasks;
    private List<Notification> notifications;

    public User(String userID, String username, String password) {
        this.userID = userID;
        this.username = username;
        this.password = password;
        this.assignedTasks = new ArrayList<>();
        this.notifications = new ArrayList<>();
    }

    public String getUserID() {
        return userID;
    }

    public String getUsername() {
        return username;
    }

    public void assignTask(Task task) {
        assignedTasks.add(task);
    }

    public List<Task> getAssignedTasks() {
        return assignedTasks;
    }

    public void receiveNotification(Notification notification) {
```

```java
public class Project {
    private String projectName;
    private String projectDescription;
    private List<Task> projectTasks;
    private List<User> projectTeam;

    public void addTask(Task task) {
    }
    public void removeTask(Task task) {
    }
    public void addTeamMember(User user) {
    }
    public void removeTeamMember(User user) {
    }
}
```

```java
public class Organizations {
    private String organizationName;
    private List<Team> organizationTeams;

    public Organizations(String organizationName) {
    }
    public void createTeam(String teamName) {
    }
    public void addUserToTeam(User user, Team team) {
    }
    public void removeUserFromTeam(User user, Team team) {
    }
}
```

```java
public class Reminder {
    private String reminderType;
    private String reminderDatetime;
    private List<User> reminderRecipients;

    public void setReminder(Task task, String datetime, List<User> recipients) {
    }
}
```

```
public class TypeOfTask {
    private String taskTypeName;
    private String taskTypeDescription;
    private int taskPriority;
    private int taskCompletionTime;

    public String getTaskTypeName() {
    }
    public void setTaskTypeName(String name) {
    }
    public String getTaskTypeDescription() {
    }
    public void setTaskTypeDescription(String description) {
    }
    public int getTaskPriority() {
    }
    public void setTaskPriority(int priority) {
    }
    public int getTaskCompletionTime() {
    }
    public void setTaskCompletionTime(int completionTime) {
    }
}
```
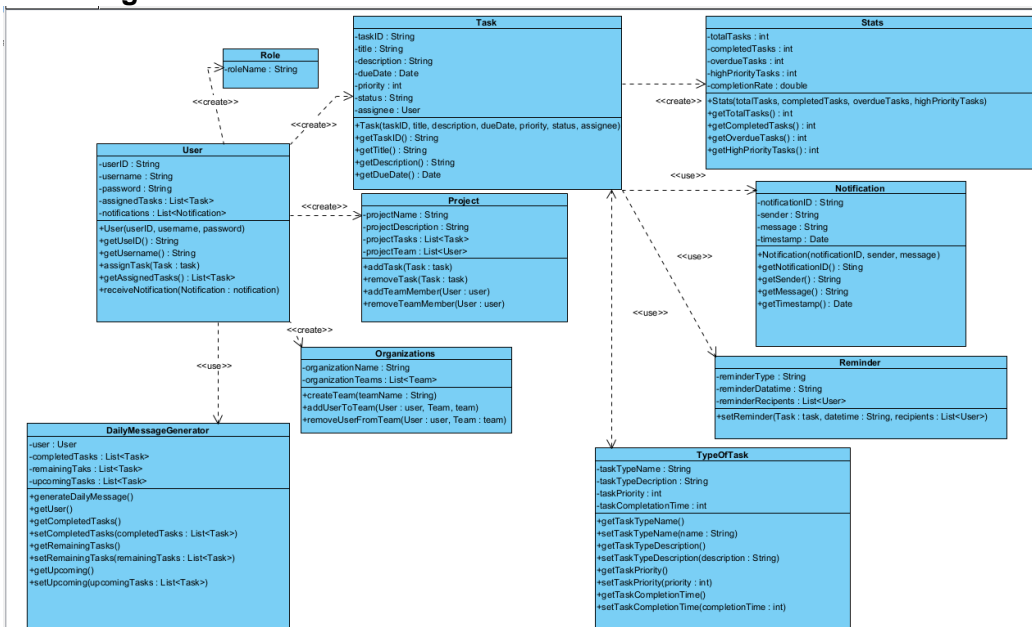
```
public class Role {
    private String roleName;
}
```

## UML Diagram:



Link docs:
https://docs.google.com/document/d/1fTA55fHGBrnDvcbcVwM91OIRAWYYiMoH7wfDrFL14DY/edit?usp=sharing