Problem Statement

Question 1: (35 Marks)

You have joined an organization as a Software developer. Your first job is to create an application to manage work of various departments on a daily basis. There are various departments as shown below

   i) **Super Department**
   ii) **Admin Department**
   iii) **Hr Department**
   iv) **Tech Department**

Super Department will be the **superclass** and all other departments **must** extend it.

Super department will contain 4 methods of return type **String** and will **not** accept any parameter

S.No	Method name	Returned String
1	departmentName	Super Department
2	getTodaysWork	No Work as of now
3	getWorkDeadline	Nil
4	isTodayAHoliday	Today is not a holiday

Admin department will contain 3 methods of return type **String** and will **not** accept any parameter

S.No	Method name	Returned String
1	departmentName	Admin Department
2	getTodaysWork	Complete your documents Submission
3	getWorkDeadline	Complete by EOD

→ **Hr department** will contain 4 methods of return type **String** and will **not** accept any parameter

S.No	Method name	Returned String
1	departmentName	Admin Department
2	getTodaysWork	Complete your documents Submission
3	getWorkDeadline	Complete by EOD
4	doActivity	Team Lunch

Tech department will contain 4 methods of return type **String** and will **not** accept any parameter

S.No	Method name	Returned String
1	departmentName	Tech Department
2	getTodaysWork	Complete coding of module 1
3	getWorkDeadline	Complete by EOD
4	getTechStackInformation	core Java

Driver class **Main** will be used to create objects of HrDepartment, TechDepartment, AdminDepartment
→ Each department will display all its functionalities.
→ Each department will display whether today is a holiday or not with the help of the Super Department. (SuperDepartment will act as a superclass for all the departments)

Expected Output

 Welcome to Admin Department
Complete your documents submission
Complete by EOD
Today is not a Holiday

 Welcome to HR Department
team Lunch
Fill today's timesheet and mark your attendance
Complete by EOD
Today is not a Holiday

 Welcome to Tech Department
Complete coding of Module 1
Complete by EOD
 Core Java
Today is not a Holiday

Question 2: (15 Marks)

Write a program to find the value of X power N using Recursion and print it.

(Do not use built-in methods. No marks will be awarded if built-in methods are used)

Sample output :

Input:
Enter the base number X: 2
Enter the power N = 10

Output:
X power N is: 1024

Learning Objectives
1. Should be able to implement the OOPS concepts where needed.
2. Should be able to write clean code with more readability.
3. Developing the ability to interpret and understand requirements provided in a problem statement.

How to upload code in Github?

Follow the approach shown in the link below for all submissions.
https://olympus1.mygreatlearning.com/online_session/recordings?access_token=eyJ0eXAiOiJK
V1QiLCJhbGciOiJIUzI1NiJ9.eyJtZW50b3JlZF9zZXNzaW9uX2lkIjo5NjYxMzh9.puI9EB-62sBFY
MzPYABhEH9Epth2G85X4dg55g7es_s