

WEB TECHNOLOGY

MINI PROJECT

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PROJECT NAME : Relative Grading System.

RELATIVE GRADING SYSTEM FOR STUDENTS

DESCRIPTION:

- Relative Grading system is a website portal that allows students to view their grades.
- The Grading system is designed by using the overall basic concepts of Java, such as **Inheritance, Interface, Exception–Handling** and so on.
- It consists of class for staffs, students, marks and bank.
- The initial homepage includes the **Login – system** for students and staffs and from this page the user will be directed to their respective pages.
- The students can view their results only after paying their semester fees.
- It also acts as a portal for staffs to enter and update the marks of the students that are handled by them.
- **Connectivity** is used to **store** and **retrieve** information from the database.

TECHNOLOGIES USED:

- Java.
- MYSQL.
- Java Database Connectivity (**JDBC**)

COST ESTIMATION:

We use the COCOMO II model to estimate the efforts required to build for Relative grading system software that produces 11 screens, 9 reports, and will require approximately 80% (assume) as new software components. We assume average (medium) complexity and average developer/environment maturity.

Object points:

Complexity Weight

Object type	Simple	Medium	Difficult
Screens	1	2	3
Report	2	5	8
3GL components			10

The object points of medium for screen is 2 and for report is 5 we use in weight factor.

Object	Count	Complexity	Weight Factor	Total Objects
Screen	11	Medium	2	22
Report	9	Medium	5	45
3GL Components	0	NA	NA	0

Total Object Points: 67

It is given that 80% of components have to be newly developed. So remaining 20% can be reused.

New object point (NOP):

$$\text{NOP} = (\text{object points}) * [(100 - \% \text{reuse}) / 100]$$

$$\text{NOP} = 67 * (100 - 20) / 100$$

$$= 67 * 80 / 100$$

$$\text{NOP} = 53.6 \text{ object points}$$

Since productivity is given average, we can assume **PROD=13**

$$\text{effort} = \text{NOP}/\text{PROD}$$

$$\text{effort} = 53.6/13$$

$$\text{effort} = 4.13 \text{ person months}$$

Hence, 4.13(effort) person months is taken for development.