

Practical Exercise: Variable Declaration, Assignment & Common Mistakes in Java

Part A: Run This Program First

```
class VariableBasics {  
  
    public static void main(String[] args) {  
  
        int age = 20;  
        double cgpa = 8.5;  
        char grade = 'A';  
        boolean passed = true;  
        String name = "Ram";  
  
        System.out.println("Name: " + name);  
        System.out.println("Age: " + age);  
        System.out.println("CGPA: " + cgpa);  
        System.out.println("Grade: " + grade);  
        System.out.println("Passed: " + passed);  
    }  
}
```

Part B: Modify the Same Program

1. Remove assignment from age variable.
2. Assign a string to an int variable.
3. Assign a decimal value to an int variable.
4. Use double quotes for char.
5. Redeclare an existing variable.
6. Assign value before declaration.
7. Remove a semicolon.
8. Try invalid variable names.

Add screenshots of output (showing errors that you encountered)

Part C: Simple Practice Task

Add the following variables:

```
int year = 2;  
String department = "CSE";
```

Print them and ensure the program runs without errors.

Questions

1. What is a variable in Java?
2. Why must a variable be declared before use?
3. What happens if a local variable is not initialized?
4. Why does Java not allow assigning text to int?
5. Difference between char and String?
6. Why is semicolon important?
7. What is redeclaration?
8. Which variable names are invalid and why?
9. Write one error you faced and how you fixed it.