**Velammal College of Engineering and Technology, Madurai**

**An Autonomous Institution**

**Department of Computer Science and Engineering**

**21CS205 Object oriented programming lab**

**Exercise No 5**

Packages

Team 1

1. Create employee class includes emp\_name, emp\_id, category (male/female), address, mail\_id, mobile\_no as members. Add Basic Pay as the member of the class.

Create pay slip calculation with 97% of BP as DA, 10% of BP as HRA, 12% of BP as PF, 0.1% of BP for staff club fund. Generate the pay slips for the employees with their gross, net salary and income tax.

Income Tax has to be calculated based on the criteria

|  |  |  |
| --- | --- | --- |
| Income | Tax Percentage | |
| Male | Female |
| <=190000 | NIL | NIL |
| <=200000 | 10% | NIL |
| <=500000 | 20% | 10% |
| >500000 | 25% | 20% |

Create separate class for employee, pay slip and income tax calculation in package name employee\_data.

Test package with 5 employee details.

2. Create a package with the following levels: pack1, pack2, and pack3. Test each package.

3. Show how protected properties from the subclass can be accessed but not default properties.

Team 2

1. Write a Java program to create a Package “YEAR\_I” which has a class YearIMarks (members – sub1mark, sub2mark). Create another package “YEAR\_II” which has a class YearIIMarks (members – sub3mark, sub4mark ). Create n objects of Student class (having rollNumber, name, YearIMarks and YearIIMarks). Calculate the Grade (‘Pass’ > =50 else ‘Fail’) for each subject and display the result of the student in proper format.

2. Create a package with the following levels: pack1, pack2, and pack3. Test each package.

3. Show how protected properties from the subclass can be accessed but not default properties.

Team 3

1. Create a package named ‘com’. Define subpackages;

* ‘transact’: with class ‘Transaction’ with static methods credit() and debit()
* ‘loan’: with class ‘LoanAccount’ with method doTransaction() which calls Transaction class methods.

Create one ‘LoanAccount’ object in main to perform operations on it by accepting command line arguments.

2. Create a package with the following levels: pack1, pack2, and pack3. Test each package.

3. Show how protected properties from the subclass can be accessed but not default properties.

Team 4

1. Develop a Java application using packages to implement the following currency converter – Dollar to Indian Rupees, Euro to Indian Rupees, Yen to Indian Rupees and vice versa.

2. Create a package with the following levels: pack1, pack2, and pack3. Test each package.

3. Show how protected properties from the subclass can be accessed but not default properties.

Team 5

1. Develop a Java application using packages to implement the following Time converter – Hours to minutes, seconds and vice versa.

2. Create a package with the following levels: pack1, pack2, and pack3. Test each package.

3. Show how protected properties from the subclass can be accessed but not default properties.

Team 6

1. Develop a Java application using packages to implement the following Distance converter Meter to KM, Miles to KM and vice versa.

2. Create a package with the following levels: pack1, pack2, and pack3. Test each package.

3. Show how protected properties from the subclass can be accessed but not default properties.

Team 7

1. Write a java program to maintain the books details like Bookid, accession number, book name, author, publication in books package and keep the journal details such as journal id; journal name in journal package ; in main class use these packages details for staff and student classes and display the books and journals information as requested by the user.

2. Create a package with the following levels: pack1, pack2, and pack3. Test each package.

3. Show how protected properties from the subclass can be accessed but not default properties.

Team 8

1. Create two classes calculator and scientific calculator and group them into a package.

2. Create a package with the following levels: pack1, pack2, and pack3. Test each package.

3. Show how protected properties from the subclass can be accessed but not default properties.