

**Ojashwi College**  
**BCA – 3<sup>rd</sup> Semester**  
**OOP in Java**

## **Lab 7: Core Packages and Collections**

1. Write a program that prints the value of sin, cos and tan of 0 degree, 30 degree, 45 degree, 60 degree and 90 degree, 120 degree, 135 degree, 150 degree, 180 degree.

Sample Output:

Angle (degree)	sin	cos	tan
0	0	1	0
30	0.5	0.866	0.577

2. Write a program to sort the array of Double numbers in ascending using compareTo method.
3. Write a class called Book having fields like ISBN, author, name, publisher and year of publication. Create a Vector of Book objects and check if a book with ISBN "9780134743356" is contained in this vector. [Assume, two book with same ISBN are equals]
4. Create class called PersonalDetail and BankingDetail for a customer of a bank. The PersonalDetail should have name, address, and phone number. The banking details should contain information like Card number, if mobile bank is activated, interest rate etc.  
Create two hashtables to store the personal details and banking details of customer based on their bank account. The program should print the personal details and banking details for the supplied bank account.
5. Write a class called Customer with field account type. The account type should have one of the following values: SAVING, CURRENT, FIXED. [Use enum]. Write a main program to illustrate concept of this enum variable.