

BABARIA INSTITUTE OF TECHNOLOGY
COMPUTER SCIENCE & ENGINEERING DEPARTMENT

OBJECT ORIENTED PROGRAMMING USING JAVA

SUBJECT CODE: 2150704

B.E. 5th SEMESTER

PRACTICAL LIST

List of Experiments:

Aim of Programme	Week#
1. Write a program to convert rupees to dollar. 60 rupees=1 dollar.	1
2. Write a program that calculates percentage marks of the student if marks of 6 subjects are given.	1
3. Write a program to enter two numbers and perform mathematical operations on them.	2
4. Write a program to find length of string and print second half of the string.	2
5. Write a program to accept a line and check how many consonants and vowels are there in line.	2
6. Write a program to count the number of words that start with capital letters.	3
7. Write a program to find that given number or string is palindrome or not.	3
8. Create a class which ask the user to enter a sentence, and it should display count of each vowel type in the sentence. The program should continue till user enters a word "quit". Display the total count of each vowel for all sentences.	3
9. Write an interactive program to print a string entered in a pyramid form. For instance, the string "stream" has to be displayed as follows:	4

<pre> S St Str Stre Stream </pre>	
<p>10. Write an interactive program to print a diamond shape. For example, if user enters the number 3, the diamond will be as follows:</p> <pre> * ** *** ** * </pre>	5
<p>11. Create a class called Student. Write a student manager program to manipulate the student information from files by using FileInputStream and FileOutputStream.</p>	5
<p>12. Refine the student manager program to manipulate the student information from files by using the BufferedReader and BufferedWriter.</p>	6
<p>13. Refine the student manager program to manipulate the student information from files by using the DataInputStream and DataOutputStream. Assume suitable data.</p>	6
<p>14. Prepare a class diagram for given group of classes using multiplicity, generalization, association concepts. And add at least 5-7 attributes and 3-5 operations for particular class Page, Shape, Point, Line, Arc, Ellipse, Rectangle, Circle.</p>	4
<p>15. Prepare a class diagram for given group of classes using multiplicity, generalization, association concepts. And add at least 5-7 attributes and 3-5 operations for particular class. City, Airport, Airline, Pilot, Flight, Plane, Seat, Passenger.</p>	4
<p>16. Categorize the following relationships into generalization,</p>	7

aggregation or association.	
[A] A country has a capital city [B] A dining philosopher uses a fork [C] A file is an ordinary file or a directory file [D] Files contains records [E] A polygon is composed of an ordered set of points [F] A drawing object is text, a geometrical object, or a group [G] A person uses a computer language on a object [H] Modems and keyboards are input/output devices [I] Classes may have several attributes [J] A person plays for a team in a certain year [K] A route connects two cities [L] A student takes a course from a professor	
17. Prepare a state diagram for an interactive diagram editor for selecting and dragging objects	8
18. Prepare a use case diagram and sequence diagram for a computer email system	9
19. Prepare an activity diagram for computing a restaurant bill, there should be charge for each delivered item. The total amount should be subject to tax and service charge of 18% for group of six and more. For smaller groups there should be a blank entry. Any coupons or gift certificates submitted by the customer should be subtracted	10
20. Prepare a sequence diagram for issuing a book in the library management system	11
Design based Problems (DP)/Open Ended Problem:	
1) Remove duplicate lines from a large text or given document.	12
2) Write a program to compute if one string is a rotation of another. For example, pit is rotation of tip as pit has same character as tip.	13