Slot :L5+L6   **Date: 01/3/2021**

Time : 11:30 - 1:00   **Prof incharge - Dr. A. Anitha**
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General Instructions

The students allotted with the question number is available at the end of the document.

1. Write your Name, Regno, Course code, Course Title, Slot on the top of the word document.

2. Copy the allotted question along with the question number and paste on the word document, which you are about to submit.

3. Compile both the source (.java) program and (output) files in the same word document and make it as a single PDF file and upload as a single program. The program should be followed by its output.

Please follow the deadline and the time. ie. The students have to upload their pdf before their Lab session or can take at the maximum five minutes after the Lab session gets over. The Assessment cannot be submitted after the deadline. The Vtop doesn't have the option for late submission, so if the student fails to submit the assignment, the mark for the assignment will be provided as ZERO.

1. Create a class *Book* with the following members:
Accession number, Name of the author, Title of the book, Year of Publication, Publisher's Name, Cost of the book and availability.

Create a class *Membership* with the following members:
Member id, Name, Maxbooks

Derive a class Library information_system from Book and Membership.
Include thefollowing member functions:
        a. Issue a book after checking member id, book id, availability of the book and Maxbooks available for the member.
        b. Update availability of book and Maxbooks after each transaction.
        c. Display the member's information given member id .
        d. Display the book's information given the accession number.

2. Write a PhoneBook class that manages a collection of Person objects. A
   PhoneBook will allow a person to add, delete, or search for a Person object in
   the address book.

   i) The add method should add a person object to the PhoneBook. Make sure
      the add method   does not add duplicate person objects to the PhoneBook.

   ii) The delete method should remove the specified person object from the
   PhoneBook.

   iii) The search method that searches the PhoneBook for a specified person and
   returns the list of persons matching the specified criteria. The search can be
   done either by first name, last name or person id.

3. Write a java program, by creating a base class number with a method calculate() to
get the sum of the given digits. Derive the base class to a subclass quadratic, to find
the real and imaginary solutions for the given quadratic equation by overriding the
method calculate(). Again derive the base class number , to another subclass called
sos , to find the sum of square of the given number by overriding the method
calculate().

4. Assume that you have written some classes. Belatedly, you decide that they should
   be split into package, as listed in the table below. Furthermore, assume that the
   classes are currently in the default package (they have no package statements).

Package Name	Class Name
Mynumber	Palindrome, Amstrong

 implement the check for palindrome and check for Amstrong number in the
considered classes

5. Develop a class TelephoneIndex with two String objects as members. One for
    should hold people's name and the other should hold their phone number. The
    class should have appropriate constructor, input and display methods. Create array
    of objects for TelephoneIndex and do the following:

              a. Your program should ask the user to enter a name or the first few

characters of a name to search for it in the array.

b. The program should display all of the names that match the user's input and their corresponding phone numbers.

REGISTER NO	NAME	Question number
18BCB0001	VAIBHAV VIJAY	1
18BCB0015	ADITI RANGANATH	2
18BCB0022	SUMITRA LELE	3
18BCB0024	M SIDDHARTH	4
18BCB0030	PRATEEK CHATURVEDI	5
18BCE0050	KUMAR UTKARSH	1
18BCE0149	ATUL RAJ	2
18BCE0169	JAMI DEEPESH	3
18BCE0196	MOHD UMAR	4
18BCE0246	ATHARVA MAHENDRA HUNDARE	5
18BCE0256	YERRAPATHRUNI KRISHNA CHAITANYA	1
18BCE0260	KOPPAVARAPU SIVAPRANAV	2
18BCE0269	NIKHIL KUMAR SINGH	3
18BCE0288	KUNALA VENKATA LOKESWAR REDDY	4
18BCE0297	YAKALA MANOJ YADAV	5
18BCE0298	KASI NISANTH REDDY	1
18BCE0327	GUNDA SAI LIKHITH	2
18BCE0342	ANCHURI HARISH	3
18BCE0352	MUNAGA MOHANA SIVA SAI	4
18BCE0371	MERUVA DINESH BABU	5
18BCE0405	AMIT YADAV	1
18BCE0485	KANDAMURU MADHURYA	2
18BCE0549	RISHAB KUMAR	3
18BCE0552	SOMISETTY MANI SUSANTH	4
18BCE0555	HIMANSHU RUWATIA	5
18BCE0570	BHAVYA TANEJA	1
18BCE0571	PRIYANSHU MASKARA	2
18BCE0572	UMANG AGARWAL	3
18BCE0605	MAVUDI CHARAN	4
18BCE0686	S A HARIPRASAD	5
18BCE0691	ARYA ABROL	1
18BCE0710	SUBHANKAR AGARWALA	2
18BCE0715	SANJIT KUMAR	3
18BCE0759	SRI TEJA ALURI	4
18BCE0785	VRINDA CHOPRA	5
18BCE0792	SAGAR GUPTA	1
18BCE0806	PARTH PATEL	2

18BCE0829	ARYAN VATS	3
18BCE0831	J K VISHWAJEET	4
18BCE0842	NAIR VIGNESH UNNIKRISHNAN	5
18BCE0877	SANIDHYA SEHGAL	1
18BCE0887	THERAMREDDY DASAVANTH REDDY	2
18BCE0894	ISHIKA AHUJA	3
18BCE0898	MITADRU SAHA	4
18BCE0912	MALLA JYOTSNA SREE MAHIMA	5
18BCE0917	ROHIT GANESH VALLAMKONDU	1
18BCE0975	ROSHAN JOHN	2
18BCE0983	HARSHA VARDAN KAMAL NALANAGULA	3
18BCE2025	RAJAT SAHAY	4
18BCE2038	SAGI HARSHAD VARMA	5
18BCE2136	SARTHAK SACHDEVA	1
18BCE2177	BHAVISHYA TARUN	2
18BCE2231	SHASHANK RAJORIA	3
18BCE2235	ADITYA PANT	4
18BCE2251	DIVYANG ARORA	5
18BCE2295	KANISHKA SOLANKI	1
18BCE2369	SAGAR KUMAR SAHA	2
18BCE2382	ANINDYA SEN	3
18BCE2486	ASHMIT BHATTA	4
18BCI0093	LEBURU GOKUL	5
18BCI0120	GOWTHAM POLLAM	1
19BCE2664	AAYUSH PARAJULI	2
19BCE2665	ROHIT ROUNIYAR	3
19BCI0093	SAJAL PUNDHIR	4
19BCT0006	N BADRINARAYAN	5