



# SRI AUROBINDO INSTITUTE OF TECHNOLOGY, INDORE

## CONTENTS

S.No.	Date of Experiment	Name of Experiment	Page No.	Date of Submission	Remark
1	07/04/2025	Write any ten features of java	1-2		
2	07/04/2025	What is Unicode and Byte Code?	3		
3	07/04/2025	How java is platform independent?	4		
4	07/04/2025	What is JDK and JRE? Differentiate?	5		
5	07/04/2025	What is the task of Class Loader, Verifier, JIT Compiler in JRE.	6-7		
6	07/04/2025	Write/compile/execute Hello World program in Java, Java Data types, Operators and IF - ELSE	8		
7	07/04/2025	Program to find area and circumference of circle	9		
8	07/04/2025	Program to calculate sum of 5 subjects & find percentage.	10		
9	07/04/2025	Program to find the simple interest.	11		
10	07/04/2025	Write a program which accepts days(eg. 670 days) as integer and display total number of years, months and days in it.	12		
11	07/04/2025	Program to convert temperature from Fahrenheit to Celsius as $C = \frac{5}{9}(F - 32)$	13		
12	07/04/2025	Program to swap two no's without using third variable.	14		

13	07/04/2025	Find the result of following (accept values for variables used in right side of expression) a. $y=x^2 + 3x - 7$ (print value of Z) b. $y=x++ + ++x$ (print value of x and y) c. $z= x++ - --y - --x + x++$ (print value of x ,y and z) d. $z = x \& y \mid ! (x \mid y)$ (print value of Z)	15-16		
14	07/04/2025	Program to reverse a given number.	17		
15	07/04/2025	In a company an employee is paid as under: If his basic salary is less than Rs. 1500, then HRA = 10% of basic salary and DA = 90% of basic salary. If his salary is either equal to or above Rs. 1500, then HRA = Rs. 500 and DA = 98% of basic salary. If the employee's salary is input by the user write a program to find his gross salary. GS=Basic+DA+HRA	18		
16	07/04/2025	Program to find greatest in 3 numbers.	19		
17	07/04/2025	Program to check that entered year is leap year or not.	20		
18	07/04/2025	Accept person age(int), gender(int 1 for male and 0 for female), then check whether person is eligible for marriage or not.	21		
19	09/04/2024	Program to print a table of any number.	22		
20	09/04/2024	Program to check whether number is prime or not	23		
21	09/04/2024	Calculate series : 1 2 + 2 2 + 3 2 + 4 2 +.....+n 2	24		
22	09/04/2024	Calculate sum of Lucas series (up to 10 terms) : 1, 2, 3, 6, 11, 20 ,.....	25		

23	09/04/2024	Print all prime numbers between two given numbers;	26		
24	09/04/2024	Program to show sum and average of 10 element array. Accept array elements from user.	27		
25	09/04/2024	Sort a ten element array in descending order.	28		
26	09/04/2024	Create a array of 17 elements in 5 rows. And calculate sum of all elements.	29-30		
27	09/04/2024	Program to find multiplication of two 3X3 matrices.	31-32		
28	09/04/2024	Program to print transpose of a matrix.	33-34		
29	09/04/2024	Create a class to calculate Area of circle with one data member to store the radius and another to store area value. Create method members 1. init - to input radius from user 2. calc - to calculate area 3. display- to display area	35-36		
30	09/04/2024	Create a class MathOperation with two data member X and Y to store the operand and third data member R to store result of operation. Create method members <ul style="list-style-type: none"><li>● init - to input X and Y from user</li><li>● add - to add X and Y and store in R</li><li>● multiply - to multiply X and Y and store in R</li><li>● power - to calculate X Y and store in R</li><li>● display- to display Result R</li></ul>	36-37		
31	09/04/2024	Create a class MathOperation containing method 'multiply' to calculate multiplication of following arguments <ul style="list-style-type: none"><li>a. two integers</li><li>b. three float</li><li>c. all elements of array</li><li>d. one double and one integer</li></ul>	38-39		
32	29/04/2025	What are the two types of Exceptions in Java? What are the differences between	41-42		

		them?			
33	29/04/2025	What are the Memory Allocations available in Java?	42		
34	29/04/2025	Explain final, finally, finalize.	43-44		
35	29/04/2025	What is a singleton class in Java? And How to break the singleton class object?	45		
36	29/04/2025	Differentiate between instance and local variables.	46		
37	29/04/2025	Can you call a constructor of a class inside another constructor of same class?	46		
38	29/04/2025	explain the Java thread lifecycle?	47-48		
39	29/04/2025	Write a prog. to find prime numbers in an array.	48		
40	29/04/2025	Can we inherit a Constructor?	49		
41	29/04/2025	How will you implement method overloading in Java?	49		
42	29/04/2025	What is Runtime Polymorphism?	50		
43	29/04/2025	How does Garbage Collection work in Java?	51		
44	29/04/2025	Write a Java program to create an ArrayList, add some colors (as strings), and print the collection.	52		
45	29/04/2025	Write a Java program to iterate through all elements in an ArrayList.	53-54		
46	29/04/2025	Write a Java program to insert an element into the ArrayList at the first position.	55		
47	29/04/2025	Write a Java program to retrieve an element at a specified index from a given ArrayList.	56		
48	29/04/2025	Write a Java program to update an ArrayList element by a given element.	57		

<b>49</b>	29/04/2025	Write a Java program to remove the third element from an ArrayList.	58		
<b>50</b>	29/04/2025	Write a Java program to search for an element in an ArrayList.	59		
<b>51</b>	29/04/2025	Write a Java program to sort a given ArrayList.	60		
<b>52</b>	29/04/2025	Write a Java program to copy one array list into another.	61		
<b>53</b>	29/04/2025	Write a Java program to shuffle elements in an array list.	62		
<b>54</b>	29/04/2025	Write a Java program to reverse elements in an array list.	63		
<b>55</b>	29/04/2025	Write a Java program to extract a portion of an array list.	67		
<b>56</b>	29/04/2025	Write a Java program to compare two array lists.	65		
<b>57</b>	29/04/2025	Write a Java program that swaps two elements in an array list.	66		
<b>58</b>	29/04/2025	Write a Java program to join two array lists.	67		
<b>59</b>	29/04/2025	Write a Java program to clone an array list to another array list.	68		
<b>60</b>	29/04/2025	Write a Java program to empty an array list.	69		
<b>61</b>	29/04/2025	Write a Java program to test whether an array list is empty or not.	70		
<b>62</b>	29/04/2025	Write a Java program for trimming the capacity of an array list.	71		
<b>63</b>	29/04/2025	Write a Java program to increase an array list size.	72		
<b>64</b>	29/04/2025	Write a Java program to replace the second element of an ArrayList with the specified element.	73		
<b>65</b>	29/04/2025	Write a Java program to print all the elements of an ArrayList using the elements' position.	74		

66	29/04/2025	Write a Java program to append a specified element to the end of a linked list.	75		
67	29/04/2025	Write a Java program to iterate through all elements in a linked list.	76		
68	29/04/2025	Write a Java program to iterate through all elements starting from a specified position in a linked list.	77		
69	29/04/2025	Write a Java program to iterate a linked list in reverse order.	78		
70	29/04/2025	Write a Java program to insert a specified element at a given position in a linked list.	79		
71	29/04/2025	Write a Java program to insert elements at the first and last positions of a linked list.	80		
72	29/04/2025	Write a Java program to add all elements from one TreeSet to another TreeSet.	81		
73	29/04/2025	Write a Java program to display the elements of a TreeSet in reverse order.	82		
74	29/04/2025	Write a Java program to retrieve the first and last elements from a TreeSet.	83		
75	29/04/2025	Write a Java program to clone a TreeSet into another TreeSet	84		
76	29/04/2025	Write a Java program to count the number of elements in a TreeSet.	85		
77	29/04/2025	Write a Java program to compare two TreeSets.	86		
78	29/04/2025	Write a Java program to clone one HashSet into another.	87		
79	29/04/2025	Write a Java program to convert a HashSet into an array.	88		
80	29/04/2025	Write a Java program to convert a HashSet into a TreeSet.	89		
81	29/04/2025	Write a Java program to find numbers less than 7 in a TreeSet.	90		
82	29/04/2025	Write a Java program to compare two HashMaps.	91		

83	29/04/2025	Write a Java program to retain common elements from two sets.	92		
84	29/04/2025	Write a Java program to remove all elements from a HashSet.	93		
85	29/04/2025	Write a Java program to copy all mappings from one map to another.	94		
86	29/04/2025	Write a Java program to remove all key-value pairs from a map.	95		
87	29/04/2025	Write a Java program to check if a map is empty or contains key-value mappings.	96		
88	29/04/2025	Write a Java program to create a shallow copy of a HashMap instance.	97		
89	29/04/2025	Write a Java program to test whether a specified key exists in the map.	98		
90	05/05/2025	Create a table Item_dtls (Electronics) Try to insert at least 10 records in the above table Try to insert at least 2 records with null value	99		
91	05/05/2025	Create a table Sales_dtls Try to insert at least 10 records in the above table Try to insert at least 2 records with null value	100		
92	05/05/2025	create a table manufacturers Try to insert at least 10 records in the above table Try to insert at least 2 records with null value	101		
93	05/05/2025	Fetch all clerks information	102		
94	05/05/2025	Display all departments information located at CHICAGO?	102		
95	05/05/2025	Display product details manufactured in the current year only?	103		
96	05/05/2025	Get the details of cutomers accounts who opened the accounts before this year?	103		

97	05/05/2025	Get all SALARY account details?	104		
98	05/05/2025	Display customer names and mobile numbers from the city 'Texas'? select cname, mobile from cust_dtls where city='Texas';	104		
99	05/05/2025	Get the information of Trading account?	105		
100	05/05/2025	Display only Expired product details? select * from prod_dtls where exp<sysdate;	105		