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| **Academic Year** | 2024-25 |
| **Subject:** | Introduction to computer programming – (01CT1101) |
| **Program and Semester:** | B. Tech. | 1st Semester |
| **Course Instructor:** | Prof. Suhag Baldaniya |
| **Student Name:** | **Devarsh Bhatt** |

**List of Experiments**

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| **Sr No.** | **Experiment** | **Page No.** | **Date** | **Signature** |
| 1 | Write a C program to Print "C Programming". |  |  |  |
| 2 | Write a C program to Print Address on screen. |  |  |  |
| 3 | Write a C program to Input two numbers and prints its square and cube. |  |  |  |
| 4 | Write a C program to Input two numbers and prints its Addition, Subtraction, Multiplication, and Division. |  |  |  |
| 5 | Write a C program to Verify the formula l=(c+d)\*(g+h). |  |  |  |
| 6 | Write a C program to Verify the formula a=p\*(1+(r/100)/n)-p. |  |  |  |
| 7 | Write a C program to count the simple interest. |  |  |  |
| 8 | Write a C program to Calculate the area of circle and triangle. |  |  |  |
| 9 | Write a C program to Input a Rupees and prints its value converted into Dollar |  |  |  |
| 10 | Write a C program to enter temperature in Celsius and convert it into Fahrenheit. |  |  |  |
| 11 | Write a C program to enter length in centimeter and convert it into meter and kilometer. |  |  |  |
| 12 | Write a C program to convert days into years, weeks. |  |  |  |
| 13 | Write a C program to Input a Number of Chairs and its Total Cost and Prints the Cost of Each chair. |  |  |  |
| 14 | Write a C program to Enter value and check it is less, equal or greater than zero. |  |  |  |
| 15 | Write a C program to find maximum from two numbers. |  |  |  |
| 16 | Write a C program to Input 3 number and print the maximum among them. |  |  |  |
| 17 | Write a C program to check whether a year is leap year or not. |  |  |  |
| 18 | Write a C program to check whether a character is alphabet or not. |  |  |  |
| 19 | Write a C program to input month number and print number of days in that month. |  |  |  |
| 20 | Write a C program to input angles of triangles and check whether triangle is valid or not. |  |  |  |
| 21 | Write a C program to input marks of five subjects Physics, Chemistry, Biology, Maths and Computer. Calculate percentage and grade according to following.(Using if else ladder)  Percentage >= 90% : Grade A Percentage >= 80% : Grade B Percentage >= 70% : Grade C Percentage >= 60% : Grade D Percentage >= 40% : Grade E Percentage < 40% : Grade F |  |  |  |
| 22 | Write a C program to input basic salary of an employee and calculate its gross salary according to following.(Using if else ladder)  Basic Salary <= 10000 : HRA = 20%, DA = 80% Basic Salary <= 20000 : HRA = 25%, DA = 90% Basic Salary > 20000 : HRA = 30%, DA = 95% |  |  |  |
| 23 | Write a program that interchange or swap the values of 2 variables with and without using 3rd  Variable. |  |  |  |
| 24 | Write a C program to Get a character from user and print that is it vowel or consonant. |  |  |  |
| 25 | Write C program to print name of Day of week using switch case. |  |  |  |
| 26 | Write a C program to generate grade system.   * If student has 70% or more than 70% then DISTINCTION. * If student has percentage between 60 and 69 then FIRST CLASS. * If student has percentage between 50 and 59 then SECOND CLASS. * If student has percentage between 40 and 49 then PASS CLASS. * If student has percentage less than 40 then FAIL. |  |  |  |
| 27 | Write a C program to input month number and print number of days in that month using switch  Case. |  |  |  |
| 28 | Write a C program to print 1 to n using while loop. |  |  |  |
| 29 | Write a C program to Print even numbers from 1to n using while loop. |  |  |  |
| 30 | Write a C program to Print N to 1 using while loop. |  |  |  |
| 31 | Write a C program to Print 1,2,4,8,16,32,64 using while loop. |  |  |  |
| 32 | Write a C program to Print the total of 1-2+3-4+5-6+7-8+9-10. |  |  |  |
| 33 | Write a C program to Accept one no from user and display sum of its digits using while loop. |  |  |  |
| 34 | Write a C program to Accept one number from user and display its factorial using while loop. |  |  |  |
| 35 | Write a C program to Accept one number from user and find if it is prime or not using while loop. |  |  |  |
| 36 | Write a C program to Accept one number from user and find if it is Armstrong or not using while loop. |  |  |  |
| 37 | Write a C program to Accept two numbers and find HCF of two numbers using while loop. |  |  |  |
| 38 | Write a C program to Accept two numbers and find LCM of two numbers using while loop. |  |  |  |
| 39 | Write a C program to Print 0 1 1 2 3 5 8 13 21 34 55 … (Fibonacci series) using while loop. |  |  |  |
| 40 | Write a C program to Display sum of 1! + 2! + 3! + 4! + 5! Up to n terms using while loop. |  |  |  |
| 41 | Write a C program to find first and last digit of given number using while loop. |  |  |  |
| 42 | Write a C program to print reverse of the number using while loop. |  |  |  |
| 43 | Write a C program to print product of digits of given number using while loop. |  |  |  |
| 44 | Write a C program to print product of first and last digit of number using while loop. |  |  |  |
| 45 | Write a C program to print multiplication table of any number using while loop. |  |  |  |
| 46 | Write a C program to find even numbers between 1 to n using while loop. |  |  |  |
| 47 | Write a C program to find odd numbers between 1 to n using while loop. |  |  |  |
| 48 | Write a C program to find sum of even numbers between 1 to n using while loop. |  |  |  |
| 49 | Write a C program to enter a number and print it into words using while loop. |  |  |  |
| 50 | Write a C program to print 1 to n using do while loop. |  |  |  |
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| 70 | Write a C program to find sum of even numbers between 1 to n using do while loop. |  |  |  |
| 71 | Write a C program to enter a number and print it into words using do while loop. |  |  |  |
| 72 | Write a C program to print 1 ton using for loop. |  |  |  |
| 73 | Write a C program to Print even numbers from 1to n using for loop. |  |  |  |
| 74 | Write a C program to Print N to 1 using for loop. |  |  |  |
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| 92 | Write a C program to find sum of even numbers between 1 to n using for loop. |  |  |  |
| 93 | Write a C program to enter a number and print it into words using for loop. |  |  |  |
| 94 | Write a C program to Print pattern like follow. \*\*\*\*\*  \*\*\*\*\*  \*\*\*\*\*  \*\*\*\*\*  \*\*\*\*\* |  |  |  |
| 95 | Write a C program to Print pattern like follow.  \*  \*\*  \*\*\*  \*\*\*\*  \*\*\*\*\* |  |  |  |
| 96 | Write a C program to Print pattern like follow. \*\*\*\*\*  \*\*\*\*  \*\*\*  \*\*  \* |  |  |  |
| 97 | Write a C program to Print pattern like follow.  \*  \*\*  \*\*\*  \*\*\*\*  \*\*\*\*\* |  |  |  |
| 98 | Write a C program to Print pattern like follow.  \*\*\*\*\*  \*\*\*\*  \*\*\*  \*\*  \* |  |  |  |
| 99 | Write a C program to Print pattern like follow.  11111  11111  11111  11111  11111 |  |  |  |
| 100 | Write a C program to Print pattern like follow.  00000  11111  00000  11111  00000 |  |  |  |
| 101  102 | Write a C program to Print pattern like follow.  01010  01010  01010  01010  Write a C program to Print pattern like follow.  11111  22222  33333  44444  55555 |  |  |  |
| 103 | Write a C program to Print pattern like follow.   1. 2 3 4 5   6 7 8 9 10  11 12 13 14 15  16 17 18 19 20  21 22 23 24 25 |  |  |  |
| 104 | Write a C program to Print pattern like follow.  11111  2222  333  44  5 |  |  |  |
| 105 | Write a C program to Print pattern like follow.  5  44  333  2222  11111 |  |  |  |
| 106 | Write a C program to Print pattern like follow.  5  54  543  5432  54321 |  |  |  |
| 107 | Write a C program to Print pattern like follow.  12345  1234  123  12  1 |  |  |  |
| 108 | Write a C program to Print pattern like follow.  54321  4321  321  21  1 |  |  |  |
| 109 | Write a C program to Print pattern like follow.  2  4 6  8 10 12  14 16 18 20  22 24 26 28 30 |  |  |  |
| 110 | Write a C program to Print pattern like follow.  1  22  333  44444  555555 |  |  |  |
| 111 | Write a C program to Print Pascal triangle. |  |  |  |
| 112 | Write a C program to print following pattern up to N rows 5  54  543  5432  54321 |  |  |  |
| 113 | Write a C program to print following pattern up to N rows 1  10  101  1010  10101 |  |  |  |
| 114 | Write a C program to Accept 5 numbers in an array and display it. |  |  |  |
| 115 | Write a C program to calculate sum of array elements. |  |  |  |
| 116 | Write a C program to Accept 10 numbers in an array, sort it and display it. |  |  |  |
| 117 | Write a C program to find maximum and minimum number from array. |  |  |  |
| 118 | Write a C program to find sum of even numbers from array list. |  |  |  |
| 119 | Write a C program to copy all elements from one array to another array. |  |  |  |
| 120 | Write a C program to insert an element into an array. |  |  |  |
| 121 | Write a C program to delete an element from an array. |  |  |  |
| 122 | Write a C program to find reverse of an array. |  |  |  |
| 123 | Write a C program to find duplicate numbers from an array. |  |  |  |
| 124 | Write a C program to Accept 9 numbers in form of matrix. (3 X 3 matrix) display it |  |  |  |
| 125 | Write a C program to perform addition between two matrices. |  |  |  |
| 126 | Write a C program to perform multiplication between two matrices. |  |  |  |
| 127 | Write a C program to perform subtraction between two matrices. |  |  |  |
| 128 | Write a C program to find transpose of matrix. |  |  |  |
| 129 | Write a C program to find length of a string. |  |  |  |
| 130 | Write a C program to copy one string to another string. |  |  |  |
| 131 | Write a C program to concatenate two strings. |  |  |  |
| 132 | Write a C program to compare two strings. |  |  |  |
| 133 | Write a C program to convert lowercase string to uppercase. |  |  |  |
| 134 | Write a C program to convert uppercase string to lowercase. |  |  |  |
| 135 | Write a C program to find total number of alphabet, digits or special character in a string. |  |  |  |
| 136 | Write a C program to count total number of vowels and consonant in a string. |  |  |  |
| 137 | Write a C program to count total number of words in a string. |  |  |  |
| 138 | Write a C program to print reverse of a string. |  |  |  |
| 139 | Write a C program to check whether a string is palindrome or not. |  |  |  |
| 140 | Write a C program to remove blank space in a string. |  |  |  |
| 141 | Write a C program to create, initialize and use pointers. |  |  |  |
| 142 | Write a C program to add two numbers using pointers. |  |  |  |
| 143 | Write a C program to swap two numbers using pointers. |  |  |  |
| 144 | Write a C program to copy one array to another using pointers. |  |  |  |
| 145 | Write a C program to swap two arrays using pointers. |  |  |  |
| 146 | Write a C program to reverse an array using pointers. |  |  |  |
| 147 | Write a C program to find length of string using pointers. |  |  |  |
| 148 | Write a C program to copy one string to another string using pointers. |  |  |  |
| 149 | Write a C program to concatenate two strings using pointers. |  |  |  |
| 150 | Write a C program to compare two strings using pointers. |  |  |  |
| 151 | Write a C program to find reverse of a string using pointers. |  |  |  |
| 152 | Write a C program to find cube of any number using function. |  |  |  |
| 153 | Write a C program to find diameter, circumference and area of circle using function. |  |  |  |
| 154 | Write a C program to find maximum and minimum between two numbers using function. |  |  |  |
| 155 | Write a C program to check whether a number is even or odd using function. |  |  |  |
| 156 | Write a C program to check whether a number is prime, Armstrong or perfect number using function. |  |  |  |
| 157 | Write a C program to find factorial of any number using recursion. |  |  |  |
| 158 | Write a C program to find power of any number using recursion. |  |  |  |
| 159 | Write a C program to find sum of natural numbers between 1 to n using recursion. |  |  |  |
| 160 | Write a C program to print reverse of a number using recursion. |  |  |  |
| 161 | Write a C program to check whether number is palindrome or not using recursion. |  |  |  |
| 162 | Write a C program to find sum of digits of given number using recursion. |  |  |  |
| 163 | Write a C program to find GCD of two numbers using recursion. |  |  |  |
| 164 | Write a C program to find LCM of two numbers using recursion. |  |  |  |
| 165 | Write a C program that shows concept of pointer. |  |  |  |
| 166 | Write a C program to swap two values (Pass by reference) |  |  |  |
| 167 | Write a C program to Get a string from user and display it in lower case and upper case |  |  |  |
| 168 | Write a C program to Create a user define function named ASCII which accept one argument (of character type)and display ASCII value of that character |  |  |  |
| 169 | Write a C program that take input of name of 10 students with gets () and just print them with puts () function. |  |  |  |
| 170 | Write a C program that take input paragraph of 10 lines. Count total no of word and total no of characters (Excluding blank spaces). |  |  |  |
| 171 | Write a C program to Create a structure named student that have member variable roll no, name, m1, m2, m3, sum, average, and grade. Program ask for roll no, name, m1, m2, m3 and calculate sum, average and grade. |  |  |  |
| 172 | Write a C program to Create a structure named EMP that have member variables employee no, employee name, basic salary, DA, HRA, TA , PF and Gross Salary |  |  |  |
| 173 | Write a C program to create a file and write contents, save and close the file. |  |  |  |
| 174 | Write a C program to copy one file to another file. |  |  |  |
| 175 | Write a C program to add data into an existing file. |  |  |  |
| 176 | Write a C program to merge two files into third file. |  |  |  |
| 177 | Write a C program to count characters, words and lines in a text file. |  |  |  |
| 178 | Write a C program to remove a word from text file. |  |  |  |