

## **PSAP Assignments List**

### **1. Assignment based on Operators and expressions**

- A. Write a program to find the size of different data types using sizeof operator.
- B. Write a program to calculate the grade of a student using a logical operator.
- C. Write a program to find out leap year using operators.

### **2. Assignment based on control statements and loop statements**

- A. if-else: Write a program to find roots of quadratic equation.
- B. Write a program to print a multiplication table of a given number.
- C. Implement a simple calculator in C using switch case construct.

### **3. Assignment based on 1 D array**

- A. Implement Linear search method using array.
- B. Write a program in C to separate odd and even integers in separate arrays.

### **4. Assignment based on multidimensional array**

- A. Write a program to implement addition, subtraction, multiplication and transpose of matrices.

### **5. Assignment based on Strings**

- A. Implement following operations on strings with and without using library functions
  - 1. Calculate length of string
  - 2. Concatenate two strings
  - 3. Compare two strings
  - 4. Reverse input string
  - 5. Copy one string into another string

### **6. Assignments based on functions(Recursive and non recursive)**

- A. Write a program in C for binary search using recursion.
- B. Write a program to implement call by value and call by reference.
  - 1. Swap two numbers using call by reference method.
  - 2. Calculate average of given numbers using call by value method.

### **7. Assignments based on pointers**

- A. Write a program in C to add two numbers using pointers.
- B. Write a program in C to find the factorial of a given number using pointers.

### **8. Assignments based on array pointers**

- A. Write a program in C to sort an array using Pointer.
- B. Write a C program to count the number of vowels and consonants in a given string using pointers.

### **9. Assignments based on Function pointers in C**

- A. Write a C program to perform basic arithmetic operations using a function pointer

### **10. Assignments based on file handling in C**

- A. Write a C program to create student information file and write contents (Student Name, Roll Number, Marks), save and close the file.
- B. Write a C program to read file contents (Student Name, Roll Number, Marks) and display contents.