**LAB Week 7**

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**Reg#:SP21-BSE-008**

**Exercise 1:** Develop a program to input the marks of 10 (ten) different subjects of a student through the keyboard, find out the aggregate marks and percentage marks obtained by the student. Assume that the maximum marks that can be obtained by a student in each subject are 100.

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| **Solution 1:**  **#include<stdio.h>**  **int main()**  **{**  **int array[10],i,size,aggregate=0;**  **float percentage;**  **printf("Enter the Size of Array:\n");**  **scanf("%d",&size);**  **printf("--------------------------\n");**  **printf("Enter the total subjects:\n");**  **for(i=0;i<size;i++)**  **{**  **printf("Subject %d:",i);**  **scanf("%d",&array[i]);**  **}**  **printf("--------------------------\n");**  **for(i=0;i<size;i++)**  **{**  **aggregate+=array[i];**  **}**  **printf("The aggregate is: %d\n",aggregate);**  **printf("--------------------------\n");**  **for(i=0;i<size;i++)**  **{**  **percentage=aggregate/size;**  **}**  **printf("The percentage is %.2f",percentage);**  **return 0;**    **}** |

**Exercise 2:** Write a program to declare an integer array of 10 elements.

1. Write a function getArray() to get array input from the user that will be used to initialize the first five (5) elements of the array by getting input from the user. The rest of the 5 entries would be set to zero (0).
2. Write a function FindEven() to find the total numbers of even numbers in the given array.
3. Write a function ModifyArray() to make the each array element to a multiple of four(04).
4. Write a function named ‘FindMax()’ that will find the largest element in the given array and return the largest element index no.

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| **Solution 2:**  **#include<stdio.h>**  **int getArray(int a[]);**  **int even(int a[]);**  **int multiply(int a[]);**  **int FindMax(int a[]);**  **int main()**  **{**  **int a[10]={0},i;**  **getArray(a);**  **system("pause");**  **system("cls");**  **even(a);**  **system("pause");**  **system("cls");**  **multiply(a);**  **system("pause");**  **system("cls");**  **FindMax(a);**  **}**  **int getArray(int a[])**  **{**  **int i;**  **for(i=0;i<5;i++)**  **{**  **printf("Enter %d Number : ",i+1);**  **scanf("%d",&a[i]);**  **}**  **printf("----------------------\n");**  **printf("\nYou Array's Elements are\n");**  **for(i=0;i<10;i++)**  **printf(" %d",a[i]);**  **}**  **int even(int a[])**  **{**  **int i;**  **printf("\n----------------------\n");**  **for (i=0;i<5;i++)**  **{**  **if (a[i]%2==0)**  **printf("\t%d is Even\n",a[i]);**  **}**  **printf("----------------------\n");**  **}**  **int multiply(int a[])**  **{**  **int i;**  **for(i=0;i<5;i++)**  **{**  **printf("%d X 4 is %d\n",a[i],a[i]\*4);**  **}**  **printf("----------------------\n");**  **}**  **int FindMax(int a[])**  **{**  **int i;**  **for (i = 0; i <5; ++i) {**  **if (a[0] < a[i])**  **{**  **a[0] = a[i];**  **}**  **}**  **printf("Largest element = %d", a[0]);**  **}** |

**Exercise 3:** Develop a program to calculate the basic salary of 5 employees where the hourly rate and the no. of hours worked by each employee are given by the user.

1. ***Note:*** *Formula for calculating the basic salary = no. of hours worked \* hourly*

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| **Solution:**  **#include<stdio.h>**  **int main()**  **{**  **int Employees,salery,hourly\_rate,hours;**  **printf("Basic salery of Employess:");**  **printf("\n1:Employees Name Talha:");**  **printf("\n2:Employees Name Hanzala:");**  **printf("\n3:Employees Name Ali:");**  **printf("\n4:Employees Name Faisal:");**  **printf("\n5:Employees Name Umar:");**  **printf("\n\tEnter your choice(1,5):\n");**  **printf("-----------------------\n");**  **scanf("%d",&Employees);**  **printf("-----------------------\n");**  **if(Employees==1)**  **{**  **printf("Enter the working Hours:\n");**  **scanf("%d",&hours);**  **hourly\_rate=1500;**  **salery=hourly\_rate\*hours;**  **printf("The basic sallery of employees Talha is %d",salery);**  **}**  **if(Employees==2)**  **{**  **printf("Enter the working Hours:\n");**  **scanf("%d",&hours);**  **hourly\_rate=1500;**  **salery=hourly\_rate\*hours;**  **printf("The basic sallery of employees Hanzala is %d",salery);**  **}**  **if(Employees==3)**  **{**  **printf("Enter the working Hours:\n");**  **scanf("%d",&hours);**  **hourly\_rate=1500;**  **salery=hourly\_rate\*hours;**  **printf("The basic sallery of employees Ali is %d",salery);**  **}**  **if(Employees==4)**  **{**  **printf("Enter the working Hours:\n");**  **scanf("%d",&hours);**  **hourly\_rate=1500;**  **salery=hourly\_rate\*hours;**  **printf("The basic sallery of employees Faisal is %d",salery);**  **}**  **if(Employees==5)**  **{**  **printf("Enter the working Hours:\n");**  **scanf("%d",&hours);**  **hourly\_rate=1500;**  **salery=hourly\_rate\*hours;**  **printf("The basic sallery of employees Umar is %d",salery);**  **}**  **}** |