**LAB EXERCISE-1**

*Domain:Gym*

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*I MCA B*

*#include <stdio.h>*

*#include <time.h>*

*struct Gym*

*{*

*int FirstWorkout[2][2];*

*int SecondWorkout[2][2];*

*};*

*void Workout(struct Gym \*arrayp)*

*{*

*printf("First Workout\n");*

*int c=1;*

*for (int i = 0; i < 2; i++)*

*{*

*for (int j = 0; j < 2; j++)*

*{*

*int k=1;*

*printf("Set Number:%d Rep:",c);*

*scanf("%d", &arrayp->FirstWorkout[i][j]);*

*c++;*

*}*

*}*

*printf("\n Second Workout\n");*

*int m=1;*

*for (int i = 0; i < 2; i++)*

*{*

*for (int j = 0; j < 2; j++)*

*{*

*printf("Set Number:%d Rep:",m);*

*scanf("%d", &arrayp->SecondWorkout[i][j]);*

*m++;*

*}*

*}*

*display(arrayp);*

*}*

*void display(struct Gym \*arrayp)*

*{*

*printf("\nThe First Workout matrix is:\n");*

*for (int i = 0; i < 2; i++)*

*{*

*for (int j = 0; j < 2; j++)*

*{*

*printf(" %d", arrayp->FirstWorkout[i][j]);*

*}*

*printf("\n");*

*}*

*printf("\nthe second Workout matrix is:\n");*

*for (int i = 0; i < 2; i++)*

*{*

*for (int j = 0; j < 2; j++)*

*{*

*printf(" %d", arrayp->SecondWorkout[i][j]);*

*}*

*printf("\n");*

*}*

*operations(arrayp);*

*}*

*void operations(struct Gym \*arrayp)*

*{*

*int choice;*

*// struct Gym arr[2][2] = {0};*

*printf("\n1.Delete\n2.Search\n3.Matrix Operations\nEnter Your Choice: ");*

*scanf("%d", &choice);*

*switch (choice)*

*{*

*case 1:*

*int delete,count=0;*

*printf("\n Enter the element to delete:");*

*scanf("%d",&delete);*

*for (int i = 0; i < 2; i++)*

*{*

*for (int j = 0; j < 2; j++)*

*{*

*if(delete == arrayp->FirstWorkout[i][j])*

*{*

*arrayp->FirstWorkout[i][j] = 0;*

*count=count+1;*

*}*

*else if(delete == arrayp->SecondWorkout[i][j])*

*{*

*arrayp->SecondWorkout[i][j] = 0;*

*count=count+1;*

*}*

*else*

*{*

*}*

*}*

*}*

*if(count >= 1)*

*{*

*printf("\nElement Deleted Successfully\n");*

*display(arrayp);*

*}*

*else*

*{*

*printf("Element is not found ");*

*operations(arrayp);*

*}*

*break;*

*case 2:*

*int Target,i,c=0;*

*printf("\nEnter the value of to be searched:\n");*

*scanf("%d",&i);*

*Target=i;*

*printf("\nIn which workout matrix you need to search\n1.First\n2.Second\nEnter your choice :");*

*scanf("%d", &choice);*

*switch (choice)*

*{*

*case 1:*

*for (int k = 0; k < 2; k++)*

*{*

*for (int m = 0; m< 2; m++)*

*{*

*if(Target == arrayp->FirstWorkout[k][m])*

*{*

*printf("Element found at(%d,%d)",k,m,Target);*

*c=c+1;*

*}*

*}*

*printf("\n");*

*}*

*if(c=0)*

*{*

*printf("Element is not found");*

*}*

*operations(arrayp);*

*break;*

*case 2:*

*for (int k = 0; k < 2; k++)*

*{*

*for (int m = 0; m< 2; m++)*

*{*

*if(Target == arrayp->SecondWorkout[k][m])*

*{*

*printf("Element found at(%d,%d)",k,m,Target);*

*c=c+1;*

*}*

*else*

*{*

*}*

*}*

*printf("\n");*

*}*

*if(c=0)*

*{*

*printf("Element is not found");*

*}*

*operations(arrayp);*

*break;*

*default:*

*printf("\nYeah Buddy Choose Correct Option!!!\n");*

*operations(arrayp);*

*break;*

*}*

*break;*

*case 3:*

*matrixoperations(arrayp);*

*default:*

*printf("\nYeah Buddy Choose Correct Option!!!\n");*

*break;*

*}*

*}*

*void matrixoperations(struct Gym \*arrayp)*

*{*

*int summatrix[2][2];*

*int diffmatrix[2][2];*

*printf("\nAddition of two matrices\n");*

*for (int i = 0; i < 2; i++)*

*{*

*for (int j = 0; j < 2; j++)*

*{*

*summatrix[i][j]=arrayp->FirstWorkout[i][j]+arrayp->SecondWorkout[i][j];*

*}*

*}*

*for (int i = 0; i < 2; i++)*

*{*

*for (int j = 0; j < 2; j++)*

*{*

*printf(" %d", summatrix[i][j]);*

*}*

*printf("\n");*

*}*

*printf("\nSubstraction of two matrices\n");*

*for (int i = 0; i < 2; i++)*

*{*

*for (int j = 0; j < 2; j++)*

*{*

*diffmatrix[i][j]=arrayp->SecondWorkout[i][j]-arrayp->FirstWorkout[i][j];*

*}*

*}*

*for (int i = 0; i < 2; i++)*

*{*

*for (int j = 0; j < 2; j++)*

*{*

*printf(" %d", diffmatrix[i][j]);*

*}*

*printf("\n");*

*}*

*}*

*int main()*

*{*

*int choice;*

*struct Gym arr[2][2];*

*printf("\nWelcome To War!\n");*

*printf("\n Register Yourself To Start Building!\n");*

*printf("\n1.Biceps\n2.Chest\nEnter Your Choice: ");*

*scanf("%d", &choice);*

*switch (choice)*

*{*

*case 1:*

*Workout(&arr[0][0]);*

*break;*

*case 2:*

*Workout(&arr[0][0]);*

*break;*

*default:*

*printf("\nYeah Buddy Choose Correct Option!!!\n");*

*break;*

*}*

*return 0;*

*}*





