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**NAME : JASS BARI**

**SECTION : F**

**ROLL NO. : 2023871**

**Q8:Write a Program to input an array and reverse the array elements from particular index to the last using dynamic memory allocation. \*/**

#include<stdio.h>

#include<stdlib.h>

int main()

{

int n,i,j,\*p,start,temp;

printf("\t\t\t\t\t\tOUTUPUT\t\n");

printf("\t\t\t\t\*\*\*\*\*\*\*\*INPUT\*\*\*\*\*\*\*\*\t\n");

printf("Input a number of elements:\n");

scanf("%d",&n);

p=(int\*)malloc(n\*sizeof(int));

printf("Enter an elements of an array:\n");

for(i=0;i<n;i++)

{

scanf("%d",(p+i));

}

printf("Input a particular index to be reversed:\n");

scanf("%d",&start);

for(i=start-1,j=n-1;i<j;i++,j--)

{

temp=\*(p+i);

\*(p+i)=\*(p+j);

\*(p+j)=temp;

}

printf("\t\t\t\t\*\*\*\*\*\*\*\*OUTPUT\*\*\*\*\*\*\*\*\t\n");

printf("Revered array by a particular index:\n");

for(i=0;i<n;i++)

{

printf("%d ",\*(p+i));

}

return 0;

}

**OUTUPUT**

**PS C:\Users\HP\Desktop\termworkc> cd "c:\Users\HP\Desktop\termwork c\" ;**

\*\*\*\*\*\*\*\*INPUT\*\*\*\*\*\*\*\*

Input a number of elements:

10

Enter an elements of an array:

1 2 3 4 5 6 7 8 9 10

Input a particular index to be reversed:

\*\*\*\*\*\*\*\*OUTPUT\*\*\*\*\*\*\*\*

Revered array by a particular index:

1 2 3 10 9 8 7 6 5 4

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**ROLL NO. : 2023871**

**Q9:Design a structure named "Car" to store details like car ID, model, and rental rate per day.**

**Write a C program to input data for n cars, calculate the total rental cost for a specified number of days, and display the results. \*/**

#include<stdio.h>

#include<string.h>

struct car{

int carId;

int model;

float rentalRate;

};

int main()

{

int i,n,days;

float totalCost;

printf("\t\t\t\tOUTPUT\t\n");

printf("\t\t\t\*\*\*\*\*\*\*\*\*INPUT\*\*\*\*\*\*\*\*\n");

printf("Enter a total number of car:\n");

scanf("%d",&n);

struct car c[n];

for(i=0;i<n;i++)

{

printf("\nEnter details for Car %d:\n", i + 1);

printf("\nCar ID:");

scanf("%d",&c[i].carId);

printf("\nModel Number:");

scanf("%d",&c[i].model);

printf("\nRent cost per day:");

scanf("%f",&c[i].rentalRate);

}

printf("Enter a number of days of rental:\n");

scanf("%d",&days);

printf("\t\t\t\*\*\*\*\*\*\*\*\*OUTPUT\*\*\*\*\*\*\*\*\n");

for(i=0;i<n;i++)

{

totalCost+=c[i].rentalRate\*days;

}

printf("\nTotal rental cost for %d days for %d cars is: %f\n", days,n,totalCost);

return 0;

}

**OUTPUT**

**PS C:\Users\HP\Desktop\termworkc> cd "c:\Users\HP\Desktop\termwork c\" ;**

\*\*\*\*\*\*\*\*\*INPUT\*\*\*\*\*\*\*\*

Enter a total number of car:

4

Enter details for Car 1:

Car ID:894199

Model Number:295593

Rent cost per day:5000

Enter details for Car 2:

Car ID:686973

Model Number:1880062

Rent cost per day:400

Enter details for Car 3:

Car ID:239584

Model Number:999751

Rent cost per day:5500

Enter details for Car 4:

Car ID:819208

Model Number:766882

Rent cost per day:6000

Enter a number of days of rental:

10

\*\*\*\*\*\*\*\*\*OUTPUT\*\*\*\*\*\*\*\*

Total rental cost for 10 days for 4 cars is: 169000.000000

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**NAME : JASS BARI**

**SECTION : F**

**ROLL NO. : 2023871**

**Q10: . Create a structure to specify data on students given below: Roll number, Name, Department, Course, Year of joining Assume that there are not more than 450 students in the college.**

**(a) Write a function to print names of all students who joined in a particular year.**

**(b) Write a function to print the data of a student whose roll number is given. \*/**

#include<stdio.h>

#include<string.h>

struct student

{

char nm[30];

int roll;

char course[30];

char depart[30];

int yoj;

};

void yearOfJoin ();

void rollNum ();

int

main ()

{

struct student stu[450];

int i, n, r, year;

printf ("\t\t\t\tOUTPUT\n");

printf ("\t\t\t\*\*\*\*\*\*\*\*INPUT\*\*\*\*\*\*\*\*\n");

printf ("Input a number of a student: ");

scanf ("%d", &n);

for (i = 0; i < n; i++)

{

printf ("\nInput details of %d student:\n", i + 1);

printf ("Input a name:");

scanf ("%s", stu[i].nm);

printf ("Input a roll number:");

scanf ("%d", &stu[i].roll);

printf ("Input a course:");

scanf ("%s", stu[i].course);

printf ("INput a department:");

scanf ("%s", stu[i].depart);

printf ("Input a year of joining:");

scanf ("%d", &stu[i].yoj);

}

printf ("\nInput a particular year:");

scanf ("%d", &year);

printf ("\nInput a roll number:");

scanf ("%d", &r);

printf ("\t\t\t\*\*\*\*\*\*\*\*OUTPUT\*\*\*\*\*\*\*\*\n");

yearOfJoin (stu, n, year);

rollNum (stu, n, r);

return 0;

}

Void yearOfJoin (struct student stu[], int n, int year)

{

int i, f=0;

printf("Students who join in %d year\n",year);

for (i = 0; i < n; i++)

{

if (stu[i].yoj == year)

{

printf("Name:%s\n",stu[i].nm);

f=1;

}

}

if(f==0)

printf ("Sorry!,Any student did not take admmission in %d year:\n", year);

}

void rollNum (struct student stu[], int n, int r)

{

int i,f=0;

for (i = 0; i < n; i++)

{

if (stu[i].roll == r)

{

printf ("The data of student who's roll number is %d\n", r);

printf("Name:%s",stu[i].nm);

printf("\nRoll number:%d",stu[i].roll);

printf("\nCourse:%s",stu[i].course);

printf("\nDepartment:%s",stu[i].depart);

printf("\nYear of joining:%d",stu[i].yoj);

f=1;

}

}

**if(f==0)**

**{**

**printf("Any student does not have the %d roll number",r);**

**}**

**}**

**OUTPUT(1)**

**PS C:\Users\HP\Desktop\termworkc> cd "c:\Users\HP\Desktop\termwork c\"**

**\*\*\*\*\*\*\*\*INPUT\*\*\*\*\*\*\*\***

Input a number of a student: 4

Input details of 1 student:

Input a name:faiz

Input a roll number:44

Input a course:BTECH

INput a department:CSE

Input a year of joining:2023

Input details of 2 student:

Input a name:Aryan

Input a roll number:43

Input a course:BTECH

INput a department:CSE

Input a year of joining:2023

Input details of 3 student:

Input a name:jass

Input a roll number:48

Input a course:MBA

INput a department:AI&ML

Input a year of joining:2023

Input details of 4 student:

Input a name:Vivek

Input a roll number:52

Input a course:BSC

INput a department:CS

Input a year of joining:2021

Input a particular year:2023

Input a roll number:52

**\*\*\*\*\*\*\*\*OUTPUT\*\*\*\*\*\*\*\***

Students who join in 2023 year

Name:faiz

Name:Aryan

Name:jass

The data of student who's roll number is 52

Name:Vivek

Roll number:52

Course:BSC

Department:CS

Year of joining:2021

**OUTPUT(2)**

**PS C:\Users\HP\Desktop\termworkc> cd "c:\Users\HP\Desktop\termwork c\"**

**\*\*\*\*\*\*\*\*INPUT\*\*\*\*\*\*\*\***

Input a number of a student: 4

Input details of 1 student:

Input a name:faiz

Input a roll number:44

Input a course:BTCEh

INput a department:CSE

Input a year of joining:2023

Input details of 2 student:

Input a name:Jass

Input a roll number:48

Input a course:BTECh

INput a department:CSE

Input a year of joining:2023

Input details of 3 student:

Input a name:Vivek

Input a roll number:52

Input a course:BTCEh

INput a department:CSE

Input a year of joining:2021

Input details of 4 student:

Input a name:Aryan

Input a roll number:43

Input a course:BSC

INput a department:CS

Input a year of joining:2022

Input a particular year:2024

Input a roll number:51

**\*\*\*\*\*\*\*\*OUTPUT\*\*\*\*\*\*\***

Students who join in 2024 year

Sorry!,Any student did not take admmission in 2024 year:

Any student does not have the 51 roll number