PART-C

1.Program to enter the information of n students like name,register number,marks in three subjects into array of structures and display total, average and grade for each student. Display the records in a neat tabular form.

#include<stdio.h>

#include<conio.h>

#define MAX 10

struct student

{

char name[15];

int regno;

int m[3],tot;

float ave;

char grade[12];

};

void main()

{

struct student s[MAX];

int n,i,j;

clrscr();

printf("Enter the number of students:");

scanf("%d",&n);

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

{

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

{

printf("Name:");

scanf("%s",&s[i].name);

printf("Regno.:");

scanf("%d",&s[i].regno);

{

for(j=0;j<3;j++)

{

printf("Enter marks in 3 subjects-%d:",j+1);

scanf("%d",&s[i].m[j]);

}

s[i].tot=(s[i].m[0]+s[i].m[1]+s[i].m[2]);

s[i].ave=s[i].tot/3.0;

if(s[i].m[0]<35||s[i].m[1]<35||s[i].m[2]<35)

strcpy(s[i].grade,"fail");

else

if(s[i].ave>=70)

strcpy(s[i].grade,"distinction");

else

if(s[i].ave>=60)

strcpy(s[i].grade,"first");

else

if(s[i].ave>=50)

strcpy(s[i].grade,"second");

else

strcpy(s[i].grade,"pass");

}

}

}

printf("\n---------------------------------------------------------------------");

printf("\n Name Regno sub1 sub2 sub3 total average grade");

printf("\n---------------------------------------------------------------------");

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

printf("\n%-16s%d%6d%6d%6d%7d%9.2f%14s",s[i].name,s[i].regno,s[i].m[0],s[i].m[1],s[i].m[2],s[i].tot,s[i].ave,s[i].grade);

printf("\n---------------------------------------------------------------------");

getch();

}

/\*

OUTPUT:

Enter the number of students:5

Enter the details of student-1:

Name:vijay

Regno.:101

Enter marks in 3 subjects-1:90

Enter marks in 3 subjects-2:90

Enter marks in 3 subjects-3:90

Enter the details of student-2:

Name:vignesh

Regno.:102

Enter marks in 3 subjects-1:76

Enter marks in 3 subjects-2:65

Enter marks in 3 subjects-3:50

Enter the details of student-3:

Name:manju

Regno.:103

Enter marks in 3 subjects-1:55

Enter marks in 3 subjects-2:45

Enter marks in 3 subjects-3:40

Enter the details of student-4:

Name:riteesh

Regno.:104

Enter marks in 3 subjects-1:30

Enter marks in 3 subjects-2:35

Enter marks in 3 subjects-3:45

Enter the details of student-5:

Name:Shreya

Regno.:105

Enter marks in 3 subjects-1:56

Enter marks in 3 subjects-2:57

Enter marks in 3 subjects-3:58

--------------------------------------------------------------------------------

Name Regno sub1 sub2 sub3 total average grade

---------------------------------------------------------------------------------

vijay 101 90 90 90 270 90.00 distinction

vignesh 102 76 65 50 191 63.67 first

manju 103 55 45 40 140 46.67 pass

riteesh 104 30 35 45 110 36.67 fail

Shreya 105 56 57 58 171 57.00 second

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2.Write a program to input Name of branches, Total sales of company into an array of structures, Display the branch name and sales of branch with highest sales. Assume many branches can have same highest sales.

#include<stdio.h>

#include<conio.h>

struct company

{

char bname[20];

int totsales;

}branch[10];

void main()

{

int i,high,n;

clrscr();

printf("enter the number of branches:");

scanf("%d",&n);

printf("Enter the details of branches:\n");

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

{

printf("\n");

printf("enter the branch name:");

scanf("%s",&branch[i].bname);

printf("Enter the total sales:");

scanf("%d",&branch[i].totsales);

}

high=branch[0].totsales;

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

{

if(branch[i].totsales>high)

high=branch[i].totsales;

}

printf("The branch with highest sales\n");

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

{

if(branch[i].totsales==high)

printf("%s\t%d\n",branch[i].bname,branch[i].totsales);

}

getch();

}

/\*

OUTPUT :

enter the number of branches:3

Enter the details of branches:

enter the branch name:udupi

Enter the total sales:30000

enter the branch name:manipal

Enter the total sales:25000

enter the branch name:mangluru

Enter the total sales:20000

The branch with highest sales

Udupi 30000

manipal 25000\*/

3. Menu driven program to

a) Create a text file

b) Append the contents of a text file to another existing file by accepting filenames.

c) Display the content of entered filename.

d) exit

Create two files during the execution of the program. Display their contents. Perform Appending. Display the contents again. Always check for the existence of the input files.

#include<stdio.h>

#include<conio.h>

void main()

{

FILE \*fp1,\*fp2;

char file1[20],file2[20],ch;

int choice,opt;

clrscr();

do

{

printf("\nMenu\n");

printf("1.Create a new file\n");

printf("2.Append the contents of a text file to another existing file\n");

printf("3.Display the content of a file\n");

printf("4.Exit\n");

printf("Enter tour choice:");

scanf("%d",&choice);

switch(choice)

{

case 1:

printf("Enter a new file name to create:");

scanf("%s",file1);

fp1=fopen(file1,"w");

printf("Enter the contents:\n");

fscanf(stdin,"%s",ch);

fprintf(fp1,"%s",ch);

printf("File created");

fclose(fp1);

break;

case 2:

printf("Enter first file name:");

scanf("%s",file1);

fp1=fopen(file1,"r");

if(fp1==NULL)

printf("First file doesnot exist");

else

{

printf("Enter second file name:");

scanf("%s",file2);

fp2=fopen(file2,"r");

if(fp2==NULL)

printf("Second file doesnot exist");

else

{

fclose(fp1);

fp1=fopen(file1,"a");

while((ch=getc(fp2))!=EOF)

putc(ch,fp1);

printf("Successfully appended");

fclose(fp1);

fclose(fp2);

}

}

break;

case 3:

printf("Enter file name for display");

scanf("%s",file1);

fp1=fopen(file1,"r");

if(fp1==NULL)

printf("File doesnot exist");

else

{

printf("Contents are:\n");

while((ch=getc(fp1))!=EOF)

printf("%c",ch);

fclose(fp1);

}

break;

case 4:

exit(0);

default: printf("Invalid choice");

}

printf("\nDo you wish to continue(1/0)");

scanf("%d",&opt);

}while(opt!=0);

getch();

}

/\*

OUTPUT:

Menu

1.Create a new file

2.Append the contents of a text file to another existing file

3.Display the content of a file

4.Exit

Enter tour choice:1

Enter a new file name to create:first

Enter the contents:

Welcome

File created

Do you wish to continue(1/0)1

Menu

1.Create a new file

2.Append the contents of a text file to another existing file

3.Display the content of a file

4.Exit

Enter tour choice:3

Enter file name for display:first

Contents are:

welcome

Do you wish to continue(1/0)1

Menu

1.Create a new file

2.Append the contents of a text file to another existing file

3.Display the content of a file

4.Exit

Enter tour choice:1

Enter a new file name to create:second

Enter the contents:

friends

File created

Do you wish to continue(1/0)1

Menu

1.Create a new file

2.Append the contents of a text file to another existing file

3.Display the content of a file

4.Exit

Enter tour choice:3

Enter file name for display:second

Contents are:

friends

Do you wish to continue(1/0)1

Menu

1.Create a new file

2.Append the contents of a text file to another existing file

3.Display the content of a file

4.Exit

Enter tour choice:2

Enter first file name:first

Enter second file name:second

Successfully appended

Do you wish to continue(1/0)1

Menu

1.Create a new file

2.Append the contents of a text file to another existing file

3.Display the content of a file

4.Exit

Enter tour choice:3

Enter file name for display:first

Contents are:

welcomefriends

Do you wish to continue(1/0)1

Menu

1.Create a new file

2.Append the contents of a text file to another existing file

3.Display the content of a file

4.Exit

Enter tour choice:5

Invalid choice

Do you wish to continue(1/0)0

\*/

4.Program to create a data ile ITEM to input item information ItemNo,Name,Stock and Rate/unit. Read the table ITEM and copy only those records where stock is more than 100 to another file STOCK100. Display the contents of both the files separately.Also print total number of records in each file.

#include<stdio.h>

#include<conio.h>

#include<string.h>

void main()

{

char file[10],iname[10];int n,i,stock,ino,rate;

long length;

FILE \*f1,\*f2;

clrscr();

printf("Enter the file name:");

scanf("%s",file);

f1=fopen(file,"w");

flushall();

printf("Enter the total number of item to be stored:");

scanf("%d",&n);

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

{

printf("Enter the item number:");

scanf("%d",&ino);

flushall();

printf("Enter the item name:");

gets(iname);

printf("Enter the total number of stock:");

scanf("%d",&stock);

printf("Enter the rate:");

scanf("%d",&rate);

fprintf(f1,"%d\t%s\t%d\t%d\n",ino,iname,stock,rate);

}

fclose(f1);

fprintf(stdout,"\n");

f1=fopen(file,"r");

f2=fopen("stock100","w");

printf("The detail of all item\n");

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

{

fscanf(f1,"%d%s%d%d",&ino,&iname,&stock,&rate);

if(stock>100)

{

fprintf(f2,"%d\t%s\t%d\t%d\n",ino,iname,stock,rate);

}

fprintf(stdout,"%d\t%s\t%d\t%d\n",ino,iname,stock,rate);

}

length=ftell(f2);

fclose(f1);

fclose(f2);

f2=fopen("stock100","r");

printf("Details of item whose stock is more than 100 are\n");

while(ftell(f2)<length)

{

fscanf(f2,"%d%s%d%d",&ino,&iname,&stock,&rate);

}

fprintf(stdout,"%d\t%s\t%d\t%d\n",ino,iname,stock,rate);

fclose(f2);

getch();

}

/\*

OUTPUT:

Enter the file name:ITEM

Enter the total number of item to be stored:2

Enter the item number:1

Enter the item name:mother board

Enter the total number of stock:250

Enter the rate:1000

Enter the item number:2

Enter the item name:mouse

Enter the total number of stock:90

Enter the rate:500

The detail of all item

1 mother board 250 1000

2 mouse 90 500

Details of item whose stock is more than 100 are

1 mother board 250 1000

\*/

PROGRAM 2: Write a program to reverse a number and find the sum of individual digits also check for palindrome.

#include<stdio.h>

#include<conio.h>

void main()

{

int num,rem,rev=0,sum=0,p;

clrscr();

printf("\n enter a number");

scanf("%d",&num);

p=num;

while(num!=0)

{

rem=num%10;

rev=rev\*10+rem;

sum=sum+rem;

num=num/10;

}

printf("\n after reversing:%d",rev);

printf("\n sum is %d", sum);

if(p==rev)

printf("\n it is polindrome ");

printf("\n is not polindrome");

getch();

}

OUTPUT: Enter a number: 4 6 4

After reversing: 4 6 4

Sum is: 16

It is palindrome

Enter the number: 3 2 1

After reversing: 1 2 3

Sum is: 6

It is palindrome

Is not palindrome