PRACTICAL FILE FOR PPS

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CSE (A ~2)

1. Program to print hello buddy engineers:

```
int main()
{
puts("hello buddy engineers ");
return 0;
}
```

OUTPUT

hello buddy engineers

2. Program to add two numbers:

```
int main()
{
   int a, b, c;

   printf("Enter two numbers to add\n");
   scanf("%d%d", &a, &b);

   c = a + b;
   printf("Sum of the numbers = %d\n", c);


return 0;
}
```

OUTPUT

Enter two numbersto add
2
3
Sum of the numbers is 5

3.Program to find weather the number is even or odd:

```
int main()
{
  int n;

  printf("Enter an integer\n");
  scanf("%d", &n);

  if (n%2 == 0)
    printf("Even\n");
  else
    printf("Odd\n");


return 0;
}
```

OUTPUT

Enter an integer
8
Even

4. Program to print a table of 5

```
#include <stdio.h>
int main()
{
int n, i;
printf(“Enter an integer: “);
scanf(”%d”,&n);
for(i=1; i<=10; ++i)
{
printf("%d * %d = %d \n", n, i, n*i);
```

```
}
return 0;
}
```

OUTPUT

```
Enter an integer
5
51 =5
52=10
53=15
54=20
55=25
56=30
57=35
58=40
5*(=45
5*10=50
```

5. Program to convert celcius to fahernheit

```
#include<stdio.h>
int main()
{
float C,F;
printf("Enter The Temperature in Celcius:");
scanf("%f" , &C);
F=(1.8*C)+32;
printf("Temperature in Faherenhiet is :%f\n" ,F);
return 0;
}
```

OUTPUT

```
Entewr The temperature in Celcius
34
Temperature in Faherenheit is 20.00975
```

6. Program to reverse of a number:

```
#include<stdio.h>
int main()
{
/program to reverse a number
n = number
r =reversed no.
a = remainder/
int n , r =0, a ;
printf(“Enter Any Integer”);
scanf("%d",&n);
while (n!=0)
{
a=n%10;
r=r*10 +a;
n /=10;
}
printf(“r=%d\n”,r);
return 0;
}
```

OUTPUT

```
Enter Any Integer
324
423
```

7. program to swap two numbers without using third variable

```
#include <stdio.h>

int main()
{
int a, b;

printf(“Input two integers (a & b) to swap\n”);
scanf("%d%d", &a, &b);

a = a + b;
b = a - b;
a = a - b;
```

```
printf("a = %d\nb = %d\n",a,b);
return 0;
}
```

OUTPUT

```
Input two integers(a&b) to swap
4
5
a=5
b=4
```

8. Program to find a factorial of a number

```
include<stdio.h>
int main()
{
int n, i;
unsigned long long factorial = 1;
printf("Enter an integer: ");
scanf("%d",&n);
// show error if the user enters a negative integer
if (n < 0)
printf("Error! Factorial of a negative number doesn't exist.");
else
{
for(i=1; i<=n; ++i)
{
factorial = i; // factorial = factorial*i;
}
printf("Factorial of %d = %llu", n, factorial);
}
return 0;
}
```

OUTPUT

```
Enter an integer
4
Fctorial of 4 is 24
```

9. Program to print a fabonacci series

```
#include<stdio.h>
int main()
{
int i,n,t1=0,t2=1,next_term;
printf(“ENTER NUMBER OF TERMS:”);
scanf("%d" , &n);
printf(“Fibonacci series:\n”);
for(i=1;i<=n;i++)
{
printf("%d\n" , t1);
next_term=t1+t2;
t1=t2;
t2=next_term;

}
return 0;
}
```

0utput

```
Fibonacci series
1 1 2 3 5 8 11 19
```

10.Program to find weather a number is prime or not

```
#include<stdio.h>
int main()
{
int num,i;
printf(“ENTER A NUMBER”);
scanf("%d" ,&num);

for(i=2;i<=num-1 ;i++)
{
if( num%i== 0)
{
printf(“NOT A PRIME NUMBER\n”);
break;
}
```

```
}
if(i==num)
printf(“PRIME NUMBER\n”);
}
```

OUTPUT

```
ENTER A NUMBER
3
NOT APRIME NUMBER
```

11. Program to find a number is palindrome or not:

```
#include<stdio.h>
int main()
{
int temp,digit,sum=0,num;

printf(“Enter a number”);
scanf("%d",&num);

temp = num;
while(temp>0)
{
digit=temp%10;
temp/=10;
sum = sum*10+digit;
}
if (num == sum)
printf(“The number is a palindrome number\n”);

else
printf(“The number is not a palindrome number\n”);
}
```

OUTPUT

```
Enter a number
321
The number is not a palindrome number
```

12. Program of fizz buzz game :

```
#include<stdio.h>

int main()
{
int i;
/* printf(“Enter any Number”);
scanf("%d\n",&i);*/
for(i=1;i<=30;i++)
{
if(i%15==0)
printf(“FizzBuzz\n”);

else if(i%3== 0);
printf(“Fizz\n”);
else if (i%5==0)
printf(“Buzz\n”);

else
printf("%d\n",i);
}
return 0;
}
```

13. Program to find maximum of an array:

```
#include<stdio.h>
int main()
{
int i ;

int a[i], max;

for(i=0;i<=4;i++)
{
scanf("%d",&a[i]);
max =a[0];
}
```

```
for (i=1;i<=4;i++)
{
if( max < a[i])
max = a[i];
}

printf("max of the array is:%d",max);
return 0;
}
```

14. Program of pointers:

```
#include<stdio.h>
int main()
{
int a=100,*p;
p=&a;

printf("using variable a \n");
printf("value of a :%d\n address of a: %d", a,&a);
printf("using pointer p \n");
printf("value of a:%d\n address of a:%d\n ",*p,p);
}
```

15. Program to find roots of quadratic equation:

```
#include<stdio.h>
#include<math.h>
int main()
{
float a,b,c,d,r1,r2;
printf("Program to find roots of a quadratic equation\n");

printf (" Enter a,b,c");
scanf("%.4f%.4f%.4f\n",&a,&b,&c);
d=(bb)-(4a*c);

if (d==0)
printf("The roots are equal and real\n");
else if(d<0)
```

```
printf("The roots are imaginary\n");
else if (d>0)
printf("The roots are real and unequal\n");

return 0;
}
```

16. Program to find factoraial using recursion:

```
#include<stdio.h>
int main()
{
int factorial(int i);
int i=5;
printf("Factorial is: %d\n", factorial(i));
return 0;
}
int factorial(int i)
{
if(i==1)
{
return 1;
}
else return i*factorial(i-1);
}
```

17. Program of pattern of right star:

```
#include <stdio.h>
int main()
{
int rows ,i ,j;
printf("please enter number of rows");
scanf("%d" ,&rows);

for(i=0;i<=rows;i++)
{
for(j=0;j<rows-i;j++)
{
printf(" ");
```

```
}
/print star in increasing order of row/
for(j=0;j<=i;j++)
{
printf("*");
}
/move to the next line/
printf("\n");
}
return 0;
}
```

18. Program of star left pattern :

```
#include<stdio.h>
int main()
{
int i,j;

for(i=1; i<=5;i++)
{
for(j=1; j<=i; j++)
{
printf("*");
}
printf("\n");
}
return 0;
}
```

19. Program of printing acalculator:

```
#include<stdio.h>
int main()
{
printf(" \n");
printf("|_____________|\n");
printf("| 1 | 2 | 3 | |\n");
printf("|___|___|___| |\n");
printf("| 4 | 5 | 6 | + |\n");
```

```
printf("|___|___|___|___|\n");
printf("| 7 | 8 | 9 | - |\n");
printf("| |___| ___ | \n");
printf("| 0 | * |\n");
printf("|__ |___|\n");
return 0;
}
```

20 . Program to add matrix :

```
#include<stdio.h>
int main ()
{
int r,c,a[10][10], b [10][10],sum[10][10],i,j;
printf("Enter number of rows[between 1 to 10]\n");
scanf("%d",&r);
printf("Enter number of columns[between 1 to 10]\n");
scanf("%d",&c);

printf("Enter elements of first matrix:\n");

for(i=0;i<r;i++)
for(j=0;j<c;j++)
{
printf("Enter element a%d%d:" ,i+1,j+1);
/* i+1 cz array always start from 0 ...bt we want a11 so i+1 n j+1*/
scanf("%d",&a[i][j]);
}
printf("Enter elements of second matrix\n");
for(i=0;i<r;i++)

for(j=0;j<c;j++)
{
printf("Enter elemnt a%d%d;",i+1,j+1);
scanf("%d",&b[i][j]);
}
/* adding two matrices*/
for(i=0;i<r;i++)
for (j=0;j<c;j++)
```

```
{
sum[i][j]=a[i][j]+b[i][j];
}

/displaying the result/
printf(“sum of two matrices: \n”);

for(i=0;i<r;i++)
for(j=0;j<c;j++)
{
printf("%d" , sum[i][j]);
if(j==c-1)
{
printf("\n\n");
}
return 0;
}
```

21. Program of pyramid:

```
#include<stdio.h>
int main()
{
int row,c,n,s;
printf(“ENTER THE NUMBER OF ROWS IN PYRAMID OF SATRS AS YOU WISH TO SEE\n”);
scanf("%d",&n);

s=n;

for ( row=1;row<=n;row++)
{
for(c=1;c<s;c++)/* loop to print rows*/
printf(" ");/* loop to print spaces in a row*/

s–;
for(c=1;c<=2*row-1;c++)/*loop to print stars in arow /
printf("");
printf("\n");
}
return 0;
}
```

22. Program of swaping a number by using call by value:

```
#include <stdio.h>
int main()

{
int swap(int a,int b);
int a=10,b =20;

printf("\na=%d b =%d\n",a,b);
}
int swap(int x, int y)
{
int t;
t=x;
x=y;
y=t;
printf("\n x=%d y=%d\n",x,y);
}
```

23. Program of swaping a number by call by reference:

```
#include<stdio.h>
int main()
{
int a=10,b=20;
int swapr( &a, &b);
printf("\na=%d b =%d",a,b);
}

int swapr(int*x,int *y)
{
int t;

t=*x;
*x=*y;
*y=t;
}
```

24. program to print days of aweek using switch case:

```
#include <stdio.h>

int main()
{
int week;
int choice;

printf(“Monday Willbe First Days and So On\n\n”);
printf(“Enter Any Number Between (1 to 7):”);

scanf("%d",&choice);
printf("\n");

switch(choice)
{
case 1:
printf(“Today is Monday”);
break;
case 2:
printf(“Today is Tuesday”);
break;
case 3:
printf(“Today is Wednesday”);
break;
case 4:
printf(“Today is Thursday”);
break;
case 5:
printf(“Today is Friday”);
break;
case 6:
printf(“Today is Saturday”);
break;
case 7:
printf(“Today is Sunday”);
break;
default:
printf(“Don’t Be Smart…Wrong Choice Try Again!!!”);
}
}
```

26 Program to do mathematics operation using switch case:

```
#include<stdio.h>

void main()
{
int ch;
float a,b,res;
clrscr();
printf("Enter two numbers:");
scanf("%f%f",&a,&b);
printf("nMenun1.Additionn2.Subtractionn3.Multiplicationn4.Division");
printf("nEnter your choice:");
scanf("%d",&ch);
switch(ch)
{
case 1: res=a+b;
break;
case 2: res=a-b;
break;
case 3: res=a*b;
break;
case 4: res=a/b;
break;
default: printf("Wrong choice!!nPress any key...");
getch();
exit(0);
}

printf("nResult=%f",res);
}
```

27.Program to display elements in 2D array

```
#include<stdio.h>
int main( )
{
int a[10][10], i, j, r, c ;
printf(" Enter the Numbers of Row : ") ;
```

```
scanf(“%d “,& r) ;
printf(“ Enter the Number of Coloumn : “) ;
scanf(“%d ",& c) ;

printf("\n Enter the Element of Matrix : \n") ;
for ( i = 0 ; i < r ; i++)
{
for ( j = 0 ; j < c ; i++)
{
printf("\n Enter the Element [%d] [%d] : " ,i, j) ;
scanf("%d ",& a[i][j]) ;
}
}

printf("\n Element in the Matrix are : \n") ;
for ( i = 0 ; i < r ; i++)
{
for ( j = 0 ; j < c ; i++)
{
printf("\t %d “, a[i][j]) ;
}
printf(“ \n ") ;
}
return ( 0 ) ;
}
```

28. Program to add two matrices:

```
#include <stdio.h>
int main(){
int r, c, a[100][100], b[100][100], sum[100][100], i, j;
printf(“Enter number of rows (between 1 and 100): “);
scanf(“%d”, &r);
printf(“Enter number of columns (between 1 and 100): “);
scanf(“%d”, &c);
printf("\nEnter elements of 1st matrix:\n");
for(i=0; i<r; ++i)
for(j=0; j<c; ++j)
{
printf(“Enter element a%d%d: “,i+1,j+1);
scanf(“%d”,&a[i][j]);
```

```
}
printf(“Enter elements of 2nd matrix:\n”);
for(i=0; i<r; ++i)
for(j=0; j<c; ++j)
{
printf(“Enter element a%d%d: “,i+1, j+1);
scanf(“%d”, &b[i][j]);
}
// Adding Two matrices
for(i=0;i<r;++i)
for(j=0;j<c;++j)
{
sum[i][j]=a[i][j]+b[i][j];
}
// Displaying the result
printf("\nSum of two matrices: \n");
for(i=0;i<r;++i)
for(j=0;j<c;++j)
{
printf("%d “,sum[i][j]);
if(j==c-1)
{
printf(”\n\n");
}
}
return 0;
}
```

29 Program to do transpose of a matrix:

```
#include <stdio.h>
int main()
{
int a[10][10], transpose[10][10], r, c, i, j;
printf(“Enter rows and columns of matrix: “);
scanf(”%d %d”, &r, &c);
// Storing elements of the matrix
printf("\nEnter elements of matrix:\n");
for(i=0; i<r; ++i)
for(j=0; j<c; ++j)
```

```
{
printf(“Enter element a%d%d: “,i+1, j+1);
scanf(”%d”, &a[i][j]);
}
// Displaying the matrix a[][] */
printf("\nEntered Matrix: \n");
for(i=0; i<r; ++i)
for(j=0; j<c; ++j)
{
printf("%d “, a[i][j]);
if (j == c-1)
printf(”\n\n");
}
// Finding the transpose of matrix a
for(i=0; i<r; ++i)
for(j=0; j<c; ++j)
{
transpose[j][i] = a[i][j];
}
// Displaying the transpose of matrix a
printf("\nTranspose of Matrix:\n");
for(i=0; i<c; ++i)
for(j=0; j<r; ++j)
{
printf("%d “,transpose[i][j]);
if(j==r-1)
printf(”\n\n");
}
return 0;

}
```

Output

```
Enter rows and coloumns
of matrix
3 3

Enter elements of matrix
2
3
```

```
4
5
6
7
8
9
0
Matrix is
2 3 4
5 6 7
8 9 0
Transpose of matrix
2 5 8
3 6 7
8 9 0
```

30. Program to read and print employee details using structures :

```
#include <stdio.h>

/structure declaration/
struct employee{
char name[30];
int empId;
float salary;
};

int main()
{
/declare structure variable/
struct employee emp;

/read employee details/
printf("\nEnter details :\n");
printf(“Name ?:”); gets(emp.name (http://emp.name));
printf(“ID ?:”); scanf("%d",&emp.empId);
printf(“Salary ?:”); scanf("%f",&emp.salary);
```

```
/print employee details/
printf("\nEntered detail is:");
printf("Name: %s" ,emp.name (http://emp.name));
printf("Id: %d" ,emp.empId);
printf("Salary: %f\n",emp.salary);
return 0;
}
```

Output

Enter details
Name Harshil
Id 1915033
salary
1500000

Entered details is
Name Harshil
I'd 19015033
salary
1500000