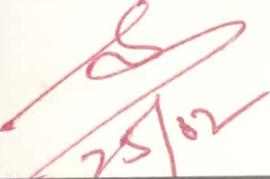
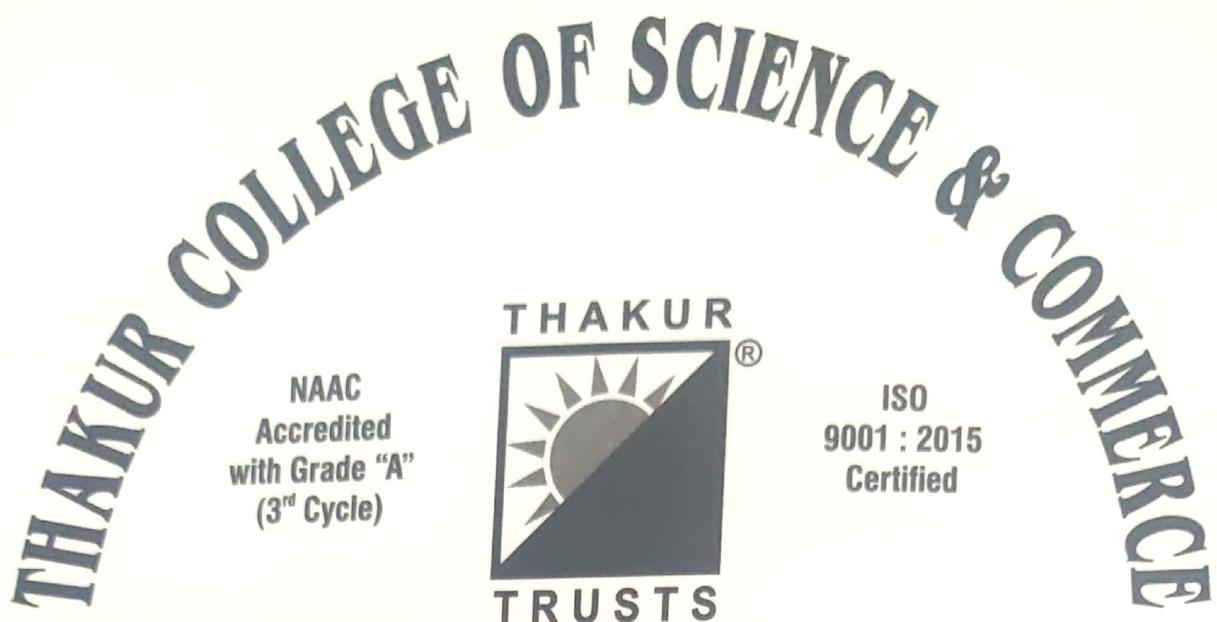


II	Completed	 25/02
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Head of Department

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Poactical no-1

Aim: Program to understand basic output and input of data types.

Program 1: Area of rectangle.

Source code:

```
#include <stdio.h>
#include <conio.h>
void main()
{
    int l, b, area;
    printf("Enter the numbers:");
    scanf("%d %d", &l, &b);
    area = l*b
    printf("The area is %d");
    getch();
}
```

as

output:-

-117.92

program 1:

Enter the number: 5 8

The area is 40

program 2: volume of sphere

Source code

```
#include <stdio.h>
#include <conio.h>
void main()
{
    clrscr();
    float r, v, pi;
    printf("Enter the radius");
    scanf("%f", &r);
    pi = 3.14;
    v = 4.0 / 3.0 * pi * r * r * r;
    printf("The volume is: %f", v);
    getch();
}
```

Program 3: Average of three numbers.

Source code:

```
#include <stdio.h>
#include <conio.h>
void main()
{
    clrscr();
    float a, b, c, avg;
    printf("Enter the num:");
    scanf("%f %f %f", &a, &b, &c);
    avg = (a + b + c) / 3;
    printf("Avg: %f", avg);
    getch();
}
```

Output: program 2

Enter radius: 7

The volume is: ~~1436.026733~~

Output 3

~~Enter the num 5 5 2~~

~~avg : 4.0~~

Program 4: convert temp to celcius to farenheit.

Source code:

```
#include < stdio.h>
#include < conio.h>
void main()
{
    float c, temp;
    clrscr();
    printf("Enter the temp in celcius");
    scanf("%f", &c);
    temp = (c * 9/5) + 32;
    printf("The converted value as %f", temp);
    getch();
}
```

28.

Output

Enter the value of calories: 3000000

Jahazinh = 37.400 002

Scanned with CamScanner

88

programs: function to convert

some code:

```
#include <stdio.h>
#include <conio.h>
void main()
{
    float f,dmp;
    clrscr();
    printf("Enter the dmp in feet:");
    scanf("%f",&f);
    dmp = (5.0/9.0) * (f - 32);
    printf("The converted dmp in celcius is %f",dmp);
    getch();
}
```

31

output

given the value : 80

answer: 26.66

25.02

Practical no - 2,

Aim: Programs on operator and Expression.

Program: Increment and Decrement.

Source code:

```
#include <stdio.h>
#include <conio.h>
void main()
{
    int a, b, c, d;
    a = 25, b = 10;
    printf("In a=%d, b=%d, ", a, b);
    c = ++a - b;
    d = b++ + a;
    printf("In a=%d, b=%d, c=%d, d=%d", a, b, c, d);
    c = a - b;
    d = a / b;
    printf("In c=%d, d=%d", c, d);
    getch();
}
```

18

Output

$$a = 25, b = 10$$

$$a = 26, b = 11, c = 16, d = 36$$

$$c = 4, d = 2$$

28

program 2: operator procedure.

source code

```
#include <stdio.h>
#include <conio.h>
void main()
{
    float a,b,c,x,y,z;
    a=8
    b=15
    c=3
```

printf ("The value of a=%f, b=%f, c=%f", a, b, c);
x=(a+b)/(3+c)*2-1;
y=(a-b)/(3+c)*(2-1);
z=(a-b)/(3*c)*2)-1;
printf ("The sum of x=%f, y=%f, z=%f"
x, y, z);

```
getch();
```

output

36

The value of $a = 8.0$, $b = 15$, $c = 3$

~~The value of $x = 8.5$, $y = 8.500$, $z = 2.00$~~

program - 3

Source code

```
#include <conio.h>
#include <Stadio.h>
void main()
{
    int a,b,c,ans;
    a=6;
    b=4
    c=1
    ans=++a&&b++ ; cout<
    cout<"The value of a="<cl
    cout<" b="<cl
    cout<" c="<cl
    cout<" ans="<cl
    getch();
}
```

Q8:

Output:

The value of $a=7, b=5, c=1, \text{ans}=1$

program :-

```
#include <stdio.h>
#include <conio.h>
void main()
{
    a, b, c, x;
    x = 10;
    a = x++;
    b = --x;
    c = x + a * --b;
    getch();
}
```

ANSWER :- The value of $a = 7 \cdot d$; $b = 7 - d$, $c = 7 \cdot a$
 $\therefore x = 7 \cdot c$ (a, b, c, d) \therefore

output

38

The value of a=10, b=9, c=90 & x=11

87
25/02

Practical - 3

Ques:

Source code

Program for Even and odd.

```
#include < stdio.h >
#include < conio.h >
void main()
{
    int n;
    printf("Enter a number : ");
    scanf("%d", &n);
    if (n % 2 == 0)
        printf("It is an even num");
    else
        printf("It is an odd number");
    getch();
}
```

88

Output

Enter a num: 5

It is an odd:

Enter a num: 2

It is an even

Q8

Program 2: leap year

Source code

```
#include <stdio.h>
#include <conio.h>
void main()
{
    int year;
    printf("Enter a year");
    scanf("%d", &year);
    if (year % 4 == 0)
        printf("It is a leap year");
    else
        printf("It is not a leap year");
    getch();
}
```

Code Output:

Enter a year : 2021
~~It is not a leap year.~~

program - 3 - Find the greater number

Code

```
#include <stdio.h>
#include <conio.h>
void main()
{
    int a, b, c;
    printf("Enter 3 no");
    scanf("%d %d %d", &a, &b, &c);
    if (a > b) && (a > c)
        printf("In a is greater");
    else if ((b > a) && (b > c))
        printf("In b is greater");
    else
        printf("In c is greater");
    getch();
}
```

Q4

Output : enter 3 no 3

a=?

b = 1

b is gun

Program to find consonant

```
#include < stdio.h >
```

```
#include < conio.h >
```

```
void main();
```

```
{
```

```
printf("Enter an Alphabet");
```

```
scanf("%c", &ch);
```

```
if ((ch >= 'a' & ch <= 'z') || (ch >= 'A' & ch <= 'Z'))
```

```
else
```

```
printf("Entered character is consonant");
```

```
getch();
```

output

Order on alfabet g
from this wordset

25/02

Practical no 4:

Aim: program to understand looping structure
while loop.

program to print even number upto 100

```
# include < stdio.h >
```

```
# include < conio.h >
```

```
void main()
```

```
{
```

```
int i;
```

```
for (i = 2, i < 100; i = i + 2)
```

```
    getch();
```

```
}
```

2 ~~# include < stdio.h >~~

~~# include < conio.h >~~

~~void main()~~

```
{
```

```
int i, n, &
```

```
printf("Enter value of n: ")
```

```
scanf("%d", &n);
```

```
i = 1;
```

S
o

Output

2

4

6

8

10

:

:

:

100

Output

7

14

21

:

56

63

70

64

```
while (i < n)
{
    x = i * 10;
    if (x == 0)
    {
        printf("i = %d\n", i);
    }
    i++;
}
```

* Program 3.

```
#include <stdio.h>
#include <conio.h>

void main()
{
    int i, n, x, sum;
    printf("Enter value of n");
    scanf("%d", &n);
    i = 1;
    sum = 0;
    do
    {
        x = i * 2;
        sum = sum + x;
        i++;
    }
```

```
if (xc == 1)
```

```
{  
    sum = sum + i;
```

```
}
```

```
g
```

```
while (ic < n);
```

```
point ("in sum of all odd num is - cl ; sum");
```

```
setchar (c);
```

```
}
```

* program 4:

```
#include < stdio.h >
#include < conio.h >
void main()
{
    int i, n;
    i = 1;
    while (i <= 5)
    {
        n = 1;
        while (n <= 5)
        {
            printf("%d\t", i);
            n++;
        }
        printf("\n");
        i++;
    }
}
```

FB

output

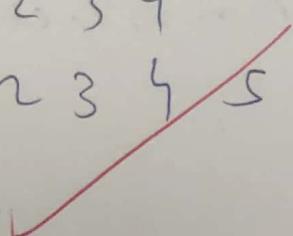
1

1 2

1 2 3

1 2 3 4

1 2 3 4 5



⇒ For loop

```
#include <stdio.h>
#include <conio.h>
void main()
{
    int i, n;
    for (i = 1; i <= n; i++)
    {
        for (int j = 1; j <= i; j++)
            printf("%*c", j);
        printf("\n");
    }
    getch();
}
```

Output



```
#include <strobo.h>
#include <conio.h>
void main()
{
    int i, u;
    for (i = 5, u = 1; i > 1; i--)
    {
        for (u = 1, u = i - 1; u > 1)
        {
            prof("u.u", u);
        }
        prof("...n");
        getch();
    }
}
```

Q4

Output

1 2 3 4 5

2 3 4 5

3 4 5

4 5

* Fibonacci series :

include < stdio.h >

include < conio.h >

void main()

int a, b, i, b;

printf ("fibonacci no")

a=1

b=0

printf ("a=%d", b);

for (i=3; i<=20; i++)

{
 f=a+b;

 printf (" %d", f);

 a=b

 b=f

}

getch();

3

Output

48

Practical nos.

Aim: To understand arrays.

```
# include < stdio.h >
```

```
# include < conio.h >
```

```
void main()
```

```
{
```

```
int i, num[5], sum = 0;
```

```
printf("Enter num ");
```

```
for (i=0; i<5; i++)
```

```
printf("In array %d", num[i]);
```

```
for (i=0; i<5; i++)
```

```
for (i=0; i<5; i++)
```

```
sum = sum + num[i];
```

```
printf("Sum of elements is %d", sum);
```

```
getch();
```

8P

Output

3
4
5
6
7

~~order elements in array are : 3, 4, 5, 6, 7
sum of elements are : 25~~

#include <conio.h>

#include <stdio.h>

void main()

{

int i; num[10]; l;

printf("In 10 value of array")

for (i=0; i<10; i++)

scanf("%d", &num[i]);

l = num[0];

for (i=1; i<10; i++)

{ if (l < num[i])

l = num[i];

}

printf("Largest number is %d", l);

in 10

from the array :-

- 55

22

5

3

9

"

16

- 19

20

no of positive value is 6

Find the sum of prime no in the array.

#include < stdio.h >

#include < conio.h >

void main()

{

int i, num[10]; p;

pointf ("Enter the elements in array");

for (i = 0; i < 10; i++)

scanf ("%d", &num[i]);

p = 1;

for (i = 0; i < 10; i++)

{ if (num[i] > 0)

p = p + 1;

}

}

printf ("sum of prime num");

getch();

}

29

Output

-55
22
3
-3
4
11
16
-19
20

No of positiu num are = 6

Program 4:

```
#include <stdio.h>
#include <conio.h>
void main()
{
    int i, num[10], p;
    printf("Enter the value into array")
    for (i=0; i<10; i++)
    {
        if (num[i] % 2 == 1)
            p = p + 1
    }
    printf("The no. of odd numbers are %d", p)
    getch();
}
```

output

52

Enter the value into array ::

2

3

4

5

6

7

8

9

no of odd number present = 5

program 5: To print matrix addition

```
# include < stdio.h >
```

```
# include < conio.h >
```

```
void main()
```

```
{
```

```
int x[3][3], y[3][3], z[3][3]
```

```
int r, c, u, t
```

```
printf("Enter no of matrix x: ")
```

```
for (r = 0; r < 3; r++)
```

```
{
```

```
for (c = 0; c < 3; c++)
```

```
{
```

```
scanf("%d", &x[r][c]);
```

```
}
```

```
{
```

```
printf("Enter no of matrix y: ")
```

```
for (r = 0; r < 3; r++)
```

```
{
```

```
for (c = 0; c < 3; c++)
```

```
{
```

```
scanf("%d", &y[r][c]);
```

```
}
```

```
such that
```

```
3
```

~~8/25/09~~
~~25/09~~

25

output

x=2

3

4

5

2

3

{
2

3

y=4

1

5

6

7

8

1

3

matrix

2	6	9	9
11	9	10	
12	3	6	

Practical no 6:

Aim: programs using string

Program I

```
#include <stdio.h>
#include <conio.h>
#include <string.h>
void main()
{
    char name[20];
    printf(" your name");
    scanf("%s", &name);
    printf(" my name is : %s", name);
    getch();
}
```

Program II

```
#include <stdio.h>
#include <conio.h>
#include <string.h>
void main()
{
    char str[20];
    printf(" story");
    getch();
    printf(" story is");
    put(str);
    getch();
}
```

Enter your name: Rishi

my name is ~~Rishi~~

Enter a string b73,

The answer is 575-

point string in vertical order

include <string.h>
include <stdio.h>
include <conio.h>
void main()

{

char name[10] = " my name "

part[10] = " my name is "

for (int i=0 ; i<10 ; i++)

{

part[i] = name[i];

putchar(part[i]);

{

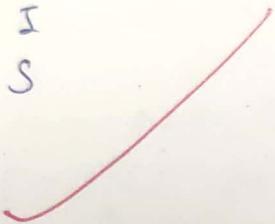
getch();

}

2.

my name is

M
Y
N
A
M
E
I
S



3.

P

B
H
H
H
S
ch
pa
6c
6g

R
R
g

4. Review

```
#include <stdio.h>
#include <conio.h>
#include <string.h>
void main()
{
    char str[10];
    puts("Enter a string");
    scanf("%s", str);
    puts("The input string is %s", str);
    getch();
}
```

(ANSWER)

from a string RISHI

~~The natural~~ string is 243 IR

5. point the char.

#include <stdio.h>
#include <conio.h>
#include <string.h>
void main()

{

char a;

clrscr();

printf("a char ");

a = getch();

printf("In the character is %c");

putchar(a);

getch();

}

25/2

26

Output

Enter a character

The character is : d

72 0

practical: 7

1. To calculate the circumference of circle.

```
#include < stdio.h >
```

```
#include < conio.h >
```

```
{
```

```
circle();
```

```
getch();
```

```
}
```

```
Void circle()
```

```
{
```

```
int r;
```

```
float a;
```

```
printf("value of r")
```

```
scanf("%d", &r);
```

```
a = 3.14 * r * r
```

```
c = 2 * 3.14 * r
```

```
printf("area = %f", a);
```

```
printf("circumference = %f", c);
```

output

from the value 5

area 2 28.5000 00

number ✓ 31.480000 0

```
#include <stdio.h>
#include <conio.h>
int get_no(void)
void main()
{
    int m;
    m = get_no();
    printf("%d\n", m);
    getch();
}

int get_no(void)
{
    int num;
    printf("num:");
    scanf("%d", &num);
    return (num);
}
```

Output

Entered = 5

Error no. 5

3. #include < stdio.h >

#include < conio.h >

void abc (int n);

void main()

{

int n;

printf (" number ");

scanf ("%d", &n);

abc (n);

} getch();

void abc (int n)

{

int s, f = 0

while (n != 0),

{

s = n % 10

f = s < s

n = n / 10;

}

printf (" sum of digits = %d ", s);

60

out per

number : 31

~~sum of digits~~ 4

```

## include <stdio.h>
## include <conio.h>
void average (int, sum)
void sum (int, a, int b, int c)
void main()
{
    int a, y, z;
    point (x, y, z, a, b, c);
    sum (x, y, z)
    getch
}
void main (int, a, int b, int c);
{
    int s;
    s = a + b + c;
    avg (s);
}
void avg (int sum)
{
    float avg;
    avg = sum / 3.0;
    point (x, y, avg + 1.0 * "avg");
}

```

02

Output
from the num. 78

Sum of two num is : 15

A

S. #include <stdio.h>

#include <math.h>

int factorial (int n);

void main()

{

clrscr();

int x, fact;

printf ("In value of x ");

scanf ("%d", &x);

fact = factorial (x);

printf ("In factorial of %d = %d ", x, fact);

getch();

}

int factorial (int n);

{

int f;

if (n == 0 || n == 1)

return (1);

else

f = n * factorial (n - 1);

return (f);

}

output

62

Enter the value of ~~$x = 4$~~
~~factor $x^2 + 2x - 24$~~

~~8
25/02~~

Practical - 8

```

#include < stdio.h>
#include < conio.h>
struct Student
{
    int rollno;
    char name[20];
    int total;
};

void main()
{
    struct Student x;
    printf("Enter rollno");
    scanf("%d", &x.rollno);
    printf("Enter name");
    scanf("%s", x.name);
    x.total = 500;
    printf("Enter total");
    scanf("%d", &x.total);
    getch();
}

```

50

Endr no of salr: 233

455557

Endr vno and salary: 3444

45555

both are ~~not correct~~

include <string>
include <conio.h>

struct employee

{

int emp_no, salary;

}

void main()

{

Struct employee n,y;

printf("Enter emp no and salary")

scanf("%d %d", &n, &salary);

printf("Id %d %d %d", n, emp_no, salary);

if (n == emp_no & salary == salary)

{

printf("both are equal")

}

else

printf("both are not equal")

getch();

/

output

from emp and salary : 23

hs

from emp and salary 23

hs

both are equal.

program : 3

```

#include <stdio.h>
#include <conio.h>
struct fruit
{
    char name[20];
    int price, quantity;
};

void main()
{
    struct fruit f[5];
    int i;
    printf("Enter name, price, quantity");
    for (i=0; i<5; i++)
    {
        scanf("%s %d %d", f[i].name, &f[i].price, &f[i].quantity);
    }
    printf("Name = %s price = %d quantity = %d", f[0].name, f[0].price, f[0].quantity);
    getch();
}

```

48
3m tree, fruit, & 40% + apple

49

50

berryish

51

52

green

53

54

55

56

57

58

59

60

61

62

63

64

65

66

67

68

69

70

71

72

73

74

75

76

77

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200

22

h. #include <stdio.h>
#include <conio.h>
#include <string.h>
Shut cursor

{
char name[20]; name[20]

for (i=0;

i<1;

void main()

{
clrscr();

cout << "Enter name : ";

cin << name;

cout << "Player";

for (i=0; i<5; i++)

{ x2 = name[i] from pos; cout

if (x>0;)

ct = pc[i]

pc[i] = pc[0]

pc[0] = t; 333

cout << "Dominic player names is "

for (i=0; i<5; ++i)

{ cout << name[i];

gush (1);
}

output

66

ms Dhoni	Ind	100
virat	Ind	100
Rohit	Ind	100
shikhar	Ind	100
Rahul	Ind	100

Concurre

ms Dhoni	Ind	100
virat	Ind	100
Rohit	Ind	100
shikhar	Ind	100
Rahul	Ind	100

#include < stdio.h >

#include < conio.h >

struct employe

{

int salary;

};

struct employe

int id;

char Name [10];

struct employe b[2];

};

void main()

{

int i;

struct employe s[2] = {"Paulish", 15003},
 prof ("In Roll no = 7-cl If Name = Y-SIT
 salary 21-cl")

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

{

8/10/2021

aa

Output

Roll no: 22 Name: RIRO Sales: 500

S.

8

Practiced 9:

1. #include <stdio.h>
 #include <conio.h>
 void main()

{

int a=12, b=4, x,y,*p,*q

p = &a

q = &b

x = *p * q - 6

y = 4 * (*p - *q) + 10

printf ("in a = %d, b = %d, q = %d", a, b, q);

printf ("in b = %d, b = %d", b, b);

printf ("in x = %d, x = %d", x, x);

printf ("in y = %d, y = %d", y, y);

getch();

}

output

a=42

b=4

x=42

y=42

68

```

#include <stdio.h>
#include <conio.h>
void main()
{
    int arr[5] = {10, 20, 30, 40, 50};
    int *p; i; sum = 0;
    p = arr;
    for (i = 0, i < 5; i++)
    {
        sum = sum + *p;
        p = p + 1;
    }
    printf ("The sum = %d", sum);
    getch();
}

```

```

#include <stdio.h>
#include <conio.h>
void main()
{

```

```

int x = 20
change();
printf ("The value of x = %d", x);
getch();
}

```

void main (int *p)

$$\{ *p = *p + 10; \}$$

89

output

$$80m = 150$$

output

$$x = 30$$

ea

4. #include < stdio.h >
#include < conio.h >
void main();
{
 int x, y;
 x = 10;
 y = 20;
 paroff("In before exchange - x = " + y + " y = " + y);
 exch(x, y);
 parpf("In after exchange - x = " + x + " y = " + y);
 getch();
}
~~void exch(int *a, int *b)~~

~~int t~~
~~t = *a~~
~~*a = *b~~
~~*b = t;~~

output

before $x=10 \ y=20$

after $\cancel{x=20} \ y=10$

70

~~25/ov~~

Practical no. 10.

```

#include <stdio.h>
#include <conio.h>
#include <string.h>
int main()
{
    FILE *fp;
    char data[80];
    printf("Open the file test.(in the write mode)");
    fp=fopen("test.c", "w");
    if (fp == NULL)
        printf("could not open file test.c");
    return 1;
    printf("\n Enter text from keyboard : do\n work in file");
    while (scanf("%s", &data)) > 0
    {
        fputs(data, fp);
        fputs("\n", fp);
    }
    printf("closing the file.c");
    fclose(fp);
    return 0;
}

```

05

output

opening the file test.c in write mode
enter some text from keyboard to
write test.c

hi, my name is Rishi!
closing the ~~file test.c~~

2. program using putw()

```
#include <stdio.h>
int main()
{
    file *fp;
    int i=1, j=2, n=3, num;
    fp=fopen ("test.c", "w");
    putw(i, fp);
    putw(j, fp);
    putw(n, fp);
    fclose(fp);
    fp=fopen ("test.c", "x");
    while (getw(fp)) i++;
    return 0;
}
```

~~# output
opening the file. cin reads much
reading the file size. c++~~

~~hi my name is Rushi!
closing the file size. c++~~

output

data in file size is

1
2
3

```

    #include <string.h>
    int main()
    {
        char name[20];
        int age, length;
        FILE *fp;
        fp = fopen ("data.dat", "w");
        fprintf(fp, "%s %d", "fresh2refresh", 5);
        length = strlen(fp);
        rewind(fp);
        fscanf(fp, "%d", &age);
        fscanf(fp, "%s", &name);
        free(fp);
        printf("Name : %s \n age : %d \n", name, age);
        printf ("Total number of char in file %d\n"
               "length);
```

return 0;

}

10/25/09

87

27

Name: Jash & refresh

age 25

~~Total num of char is 15~~