

~~1.1.0
3.09.19~~

CHAPTER 1 getting Started

Getting Started

Date _____
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(a) ~~#include <stdio.h>~~
~~#include <conio.h>~~
void main()
{

saurabh

```
int bs, rs, da, gs;  
printf("Enter basic salary");  
scanf("%f", &bs);  
da = bs * 20 / 100;  
rs = bs * 20 / 100;  
gs = bs + da + rs;  
printf("gross Salary = %f", gs);  
getch();  
}
```

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

{

```
float km, m, f, i, cm;  
printf("Enter distance in km");  
scanf("%f", &km);  
m = km * 1000;  
f = m * 3.28;  
i = f * 12;  
cm = m * 100;
```

prints ("distance in meter = 1.5(m
feet = 1.5m in feet = 1.5m
centimeter = 1.5m, m, i, f, cm);

getch();



(c) :- #include <stdio.h>
#include <conio.h>
void main();



float a,b,c,d,e,f,m,p;

printf (" enter the marks of 5 subjects"),
scanf ("%f,%f,%f,%f,%f", &a, &b, &c,
&d, &e);

m = a+b+c+d+e;

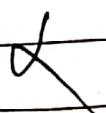
p = m/5;

printf (" aggregate marks = %f
percent = %f", m, p);

getch();



(d) :- #include <stdio.h>
#include <conio.h>
void main();



```

float c,fn;
printf("Enter temperature in Fahrenheit");
scanf("%f", &fn);
c = (fn - 32) * 5 / 9;
printf("The temperature in Celsius
      = %.2f", c);
getch();
    
```

```

1e) #include < stdio.h >
#include < conio.h >
void main()
{
    float l,b,r,ar,p,ac,cr;
    clrscr();
    printf("Enter length and breadth
          of rectangle and radius of circle");
    scanf("%f %f %f", &l, &b, &r);
    ar = l * b;
    p = 2 * (l + b);
    ac = 3.14 * r * r;
    cr = 2 * 3.14 * r;
    printf("Area of rectangle = %.2f
          in area of circle = %.2f
          in perimeter of rectangle =
          %.2f in circumference of
          circle = %.2f", ar, ac, p, cr);
    getch();
}
    
```

```

<F> #include <stdio.h>
#include <conio.h>
void main()
{
    float d = 1189, b = 841, t;
    clrscr();
    printf("In size of A0 = 11.89 mm X
           8.41 mm", d, b);
    t = b;
    b = d / 2;
    d = t;
    printf("In size of A1 = 11.89 mm X
           8.41 mm", d, b);
    t = b;
    b = d / 2;
    d = t;
    printf("In size of A2 = 11.89 mm X
           8.41 mm", d, b);
    t = b;
    b = d / 2;
    d = t;
    printf("In size of A3 = 11.89 mm X
           8.41 mm", d, b);
    t = b;
    b = d / 2;
    d = t;
    printf("In size of A4 = 11.89 mm X
           8.41 mm", d, b);
}
    
```

$t = 7;$

Printf("In size of A5 = 1.2F mm X

" "1.2F mm", l, b);

$t = b;$

$b = l/2;$

$l = t;$

Printf("In size of A6 = 1.2F mm X

" "1.2F mm", l, b);

$t = b;$

$b = l/2$

$l = t;$

Printf("In size of A7 = 1.2F mm X

" "1.2F mm", l, b);

$t = b;$

$b = l/2;$

$l = t;$

Printf("In size of A8 = 1.2F mm X

" "1.2F mm", l, b);

getch();



WPS Office - Microsoft Word

Document 1 - Microsoft Word

Document 1 - Microsoft Word

CHAPTER 2

C Instructions.

(A) Date _____
Page _____

{a} `#include <stdio.h>`
`#include <conio.h>`
`void main()`
`{`
`long int m, a, b, c, d, e, sum;`
`clrscr();`
`printf("Enter a 5-digit number");`
`scanf("%ld", &m);`
`a = m / 10;`
`m = m / 10;`
`b = m / 10;`
`m = m / 10;`
`c = m / 10;`
`m = m / 10;`
`d = m / 10;`
`m = m / 10;`
`e = m / 10;`
`Sum = a + b + c + d + e;`
`printf("Sum = %ld", Sum);`
`getch();`

{b} `#include <stdio.h>`
`#include <conio.h>`
`void main()`
`{`
`long int m, a, b, c, d, e;`
`printf("Enter a 5-digit number");`
`scanf("%ld", &m);`
`a = m / 10;`

```

m=m/10;
n=m/10;
r=m/10;
c=m/10;
d=m/10;
e=m/10;
rev=(a*10000)+(b*1000)+(c*100)
+ (d*10)+e
printf("reverse=%d",rev);
getch();
    
```

```

(C) #include <stdio.h>
#include <conio.h>
#include <math.h>
void main()
{
    float a,b,c,s,ar;
    printf("Enter 3 side's");
    scanf("%f %f %f", &a, &b, &c);
    s=(a+b+c)/2;
    ar=sqrt(s*(s-a)*(s-b)*(s-c));
    printf("area of triangle=%f", ar);
    getch();
}
    
```

Solution of program part of second
program with first program

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

```
float x, y, z, m;
clrscr();
printf("Enter x, y and z");
scanf("%f %f %f", &x, &y, &z);
m = sqrt(x*x + y*y + z*z);
printf("m = %.2f", m);
printf("m = %.2f", m);
getch();
```

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

```
float l1, l2, g1, g2, d;
clrscr();
printf("Enter l1, l2, g1, g2");
scanf("%f %f %f %f", &l1, &l2, &g1, &g2);
d = 0.628 * cos(g1) * sin(l1) * sin(l2) + cos(g1) * cos(l1) * cos(l2) * cos(g2 - g1);
printf("m = %.2f", d);
getch();
```

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

```
float t, v, wfc; j
print("Enter temp. and wind velocity");
scanf("%f %f", &t, &v);
wfc = (35.74 + 0.6215 * t) +
    (0.4235 * t - 35.75) * pow(v, 0.16);
print("WFC = %.2f", wfc);
getch();
```

g. ~~#include <stdio.h>~~
~~#include <conio.h>~~
~~#include <math.h>~~
 void main() { j
 {

```
float a, b, c, d, e, f, g;
print("Enter the value of an angle");
scanf("%f", &a);
m = 22.07 * a;
q = Sin(m); | d = Cosec(m);
r = Sec(m); | e = Sec(m);
s = Cos(m); | f = Cos(m);
if (a > 90, q = Tan(m); g = Cot(m));
print("The trigonometric
ratios are Sin = %.01m Cos = %.01m
Tan = %.01m Cosec = %.01m Sec = %.01m
Sec = %.01m", q, r, f, d, e, s);
getch();
```

```
#include <stdio.h>
#include <conio.h>
void main()
{
    int c,d,e;
    printf("Enter the value of c and d");
    scanf("%d %d", &c, &d);
    e = c;
    c = d;
    d = e;
    printf("After interchange the value of c and d = %d %d", c, d);
    getch();
}
```

I. #include <stdio.h>

#include <conio.h>

void main()

~~X~~

```
int R, H, S, TWE, TEM, F1, TWO, O; X;
printf("Enter the sum of rupees")
```

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

~~R = R / 100;~~

~~R = R * 100;~~

~~S = R / 50;~~

~~R = R * 50;~~

~~TWE = R / 20;~~

~~R = R * 20;~~

~~TEM = R / 10;~~

~~R = R * 10;~~



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Fi = R15; (indicates statement of H)

R = R'15; (also indicates statement of H)

Two = R12;

(indicates statement of H)

R = R'12;

One = R11;

(indicates statement of H)

prime (" The no. of notes

of hundred, fifty, twenty, ten,

five,

In two, in one

= 1.0 1.0 1.0 1.0 1.0 1.0 " H, F, T,

Ten, F, i, Two, One);

and so on. (statement of H)

prime (" The no. of notes of

Hundred = 1.0 1m Fifty = 1.0 1n

Twenty = 1.0 1m Ten = 1.0 1n

Five = 1.0 1m Two = 1.0 1m One = 1.0

(m), H, Fi, Tw, Ten, F, i, Two, One);

(statement of H)

CHAPTER 3 - Decision control

Ch-3 R-52 Instructions.

Q.1) IF cost price and selling price ---

#include <stdio.h>

#include <comio.h>

void main()

{

int CP, SP, LOSS, PRO;

printf("Enter the CP and SP");

scanf("%d %d", &CP, &SP);

if (CP < SP)

{

$$PRO = SP - CP$$

printf("Profit = %d", PRO);

}

else

{

$$LOSS = CP - SP$$

printf("Loss = %d", LOSS);

getch();

}

Q.2) #include <stdio.h>

#include <comio.h>

void main()

{

int n;

printf("enter any number: ");

scanf("%d", &n);

if (n % 2 == 0)

```
long long int factorial = 1;
int fact(int n) {
    if (n == 0)
        return 1;
    else
        return n * fact(n - 1);
}

int main() {
    int n;
    cout << "Enter a number: ";
    cin >> n;
    cout << "Factorial of " << n << " is " << fact(n);
}
```

(c3). ~~#include <stdio.h>~~ ~~#include <conio.h>~~
~~void main()~~

```
int y;
clrscr();
printf("Enter year:");
scanf("%d", &y);
if (y % 4 == 0)
    printf("Leap year");
else
    printf("Not leap year");
getch();
}
```

(d4). ~~#include <stdio.h>~~ ~~#include <conio.h>~~
~~void main()~~

```
int date, y, l, d, year;
cout << "Enter date, y, l & d: ";
cin >> date >> y >> l >> d;
cout << "Enter year: ";
scanf("%d", &year);
l = date / 12;
d = date % 12;
cout << "Lunar month: " << l << endl;
cout << "Days: " << d << endl;
cout << "Year: " << year << endl;
```



```
y = (year - 1);  
ly = y / 4;  
d1 = y * 365;  
date = ly + d1;  
if (date % 7 == 5)  
    printf("Friday");  
else if (date % 7 == 6)  
    printf("Saturday");  
else if (date % 7 == 1)  
    printf("Monday");  
else if (date % 7 == 2)  
    printf("Tuesday");  
else if (date % 7 == 3)  
    printf("Wednesday");  
else if (date % 7 == 4)  
    printf("Thursday");  
else if (date % 7 == 0)  
    printf("Sunday");  
else  
    printf("Unknown");
```

e.

```
#include <stdio.h>  
#include <conio.h>  
void main()  
{  
    long int m, r;  
    int a, b, c, d, e;  
    clrscr();  
    printf("enter a 5-digit no:");  
    scanf("%ld", &m);  
    a = m / 10000;  
    m = m % 10000;  
    b = m / 1000;  
    m = m % 1000;  
    c = m / 100;  
    m = m % 100;  
    d = m / 10;  
    m = m % 10;  
    e = m / 10;
```

(a) $x = (a * 10000) + (b * 1000) + (c * 100) + (d * 10) + e;$

if ($x == n$)

printf ("original and reverse are
equal");

else

printf ("original and reverse are
not equal");

getchar();

}

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

~~#include <conio.h>~~
~~void main()~~

{

int R, S, A;

clrscr();

printf ("enter the ages of Ramy
and Syam and array:");

scanf ("%d %d %d", &R, &S, &A);

if ($R < S$) SS (R < A)

printf ("Ram is youngest");

else if ($S < R & S < A$)

printf ("Syam is youngest");

else

printf ("Aayu is youngest");

getch();

}

08

```

#include <stdio.h>
#include <conio.h>
void main()
{
    int x, s, a;
    printf("Enter age");
    scanf("%d", &x);
    if (x < 18)
        printf("AJAY is young");
    else
        printf("AJAY is young");
}
    
```

(g)

```

#include <stdio.h>
#include <conio.h>
void main()
{
    int a, b, c;
    clrscr();
    printf("Enter 3 angles");
    scanf("%d %d %d", &a, &b, &c);
    if (a + b + c == 180)
        printf("Valid triangle");
    else
        printf("Invalid triangle");
    getch();
}
    
```

(h)

```

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

int a, m; // user input
scanf("%d", &a);
printf("Enter a number\n");
scanf("%d", &m);
if (a < 0) // condition
{
 m = (-1) * a; // defining
 printf("absolute value = %d\n", m);
}
else
{
 printf("absolute value = %d\n", a);
}
if // include stdio.h
// include cmath
void main()
{
 int l, b; // l & b
 cin >> l >> b; // user input
 printf("Enter length and breadth\n");
 scanf("%d%d", &l, &b);
 a = l * b; // area = length * breadth
 p = 2 * (l + b); // perimeter = 2 * (length + breadth)
 if (a > p) // condition
 {
 printf("area is greater than perimeter");
 }
 else
 {
 printf("perimeter is greater than area");
 }
 getch(); // pause program
}

```

{Q} #include <stdio.h>
#include <conio.h>
void main()
{
    float m1, y1, m2, y2, m3, y3;
    clrscr();
    printf("Enter Points:");
    scanf("%f %f %f %f %f %f", &m1, &y1, &m2, &y2, &m3, &y3);
    if((m1 * (y2 - y3) + m2 * (y3 - y1) + m3 * (y1 - y2)) == 0)
        printf("lie on the one straight line");
    else
        printf("Not lie on the one straight line");
    getch();
}
  
```

```

{Q} #include <stdio.h>
#include <conio.h>
#include <math.h>
void main()
{
    float m, y, r;
    clrscr();
    printf("Enter m and y coordinates");
    scanf("%f %f", &m, &y);
    printf("Enter radius");
    scanf("%f", &r);
}
  
```

```

if (x > sqrt(pow(x, 2) + pow(y, 2))) {
    printf("inside the circle");
} else if (x == sqrt(pow(x, 2) + pow(y, 2))) {
    printf("on the circle");
} else {
    printf("in outside the circle");
}
getch();

```

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

x

```

int x, y;
clrscr();
printf("Enter point in x & y : ");
scanf("%d %d", &x, &y);
if (x == 0 & y == 0)
    printf("Point on origin");
else if (x == 0 & y != 0)
    printf("Point on y-axis");
else if (x != 0 & y == 0)
    printf("Point on x-axis");
else if (x == 0 & y != 0)
    printf("Point on any axis");
getch();

```

y

CHAPTER 4

Ch-4 more complex decision making. (1) Page

D(9) ~~#include <stdio.h>~~ ~~#include <conio.h>~~
~~# include <stdio.h>~~
void main ()
<
 int y;
 printf ("Enter year");
 scanf ("%d", &y);
 if (y % 4 == 0 && y / 100 != 0 || y % 400 == 0)
 printf ("Leap year");
 else
 printf ("Not a leap year.");
 getch();
>

~~#include <stdio.h>~~
~~#include <conio.h>~~
void main ()
<
 int y;
 printf ("Enter year");
 scanf ("%d", &y);
 if (y % 100 == 0)
 if (y % 400 == 0)
 printf ("Leap year");
 else
 printf ("Not a leap year.");
 else
 if (y % 4 == 0)
 printf ("Leap year");
 else
 printf ("Not a leap year.");
 getch();
>

(b) ~~#include <stdio.h>~~ 0.0 <(d=0)> 0.0
~~#include <conio.h>~~ 0.0

```

void main()
{
    clrscr();
    char ch;
    printf("enter character");
    scanf("%c", &ch);
    if(ch >= 65 && ch <= 90)
        printf("In capital letter, value=%d", ch);
    else if(ch >= 97 && ch <= 122)
        printf("In Small letter, value=%d", ch);
    else if(ch >= 48 && ch <= 57)
        printf("In digit, value=%d", ch);
    else
        printf("In special symbol, value=%d", ch);
}
  
```

(c) ~~#include <stdio.h>~~ 0.0 <(d=0)> 0.0
~~#include <conio.h>~~ 0.0 0.0

```

void main()
{
    clrscr();
    int a, b, c;
    printf("Enter three numbers");
    scanf("%d %d %d", &a, &b, &c);
    if(a > b && a > c)
        printf("%d is greatest", a);
    else if(b > a && b > c)
        printf("%d is greatest", b);
    else
        printf("%d is greatest", c);
}
  
```

if ($(a+b) > c$) $\&$ $((b+c) > a)$

$\&$ $((c+a) > b)$

printf(" valid triangle");

else

printf(" Invalid triangle");

getch();

> if ("you want to exit press 1")

int A, B, C, D, E, F;

(A+B+C) == 180

(A*B*C) == 1080

if (A == B) $\&$ (B == C) $\&$ (C == A)

if (A == B) $\&$ (B == C) $\&$ (C == A)

void main()

{

(A, B, C) = float a, b, c;

circles();

printf(" enter three sides");

scanf("%f %f %f", &A, &B, &C);

if (A == B) $\&$ (B == C)

printf(" equilateral triangle");

else if (A == B) $\&$ (B == C)

$\&$ (C == A)

printf(" Isosceles triangle");

else if (A == B) $\&$ (B == C) $\&$ (A == C)

$\&$ (A == C)

$\&$ (B == C)

printf(" Scalene triangle");

else

if ("printf(" right-angle triangle"));

getch();

>



```

(c) #include <stdio.h>
#include <conio.h>
#include <math.h>
void main()
{
    float R, G, B;
    float CMYK;
    clrscr();
    printf("Enter primary colour");
    scanf("%f %f %f", &R, &G, &B);
    W = max(R/255, G/255, B/255);
    C = ((W - R/255) / W);
    M = ((W - G/255) / W);
    Y = ((W - B/255) / W);
    printf("\n%.2f %.2f %.2f", C, M, Y);
    getch();
}
  
```

(F)

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

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

```
void main()
```

{

```
float h, cc, ts;
```

```
: clrscr();
```

```
printf("Enter Hardness, carbon
```

```
content and tensile strength:");
```

```
scanf("%f,%f,%f", &h, &cc, &ts);
```

```
if (h > 50) BB(cc < 0.7) SS(ts > 5600)
```

```
printf("Grade is 10");
```

```
else if (h > 50) SS(cc < 0.7) BB(ts > 5600)
```

```
printf("Grade is 9");
```

```
else if (h < 50) BB(cc < 0.7) SS(ts > 5600)
```

```
printf("Grade is 8");
```

```
else if (h > 50) BB(cc > 0.7) SS(ts > 5600)
```

```
printf("Grade is 7");
```

```
else if (h > 50) II(cc < 0.7) II(ts > 5600)
```

```
printf("Grade is 6");
```

```
else
```

```
printf("Grade is 5");
```

```
getch();
```

}

(G)

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

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

```
void main()
```

{

```
float w, h, bni;
```

```
: clrscr();
```



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```

    // In M
printf(" Enter weight and height "); In kg
scanf(" %f %f ", &w, &h);
bmi = w / (h * h); meters

if (bmi < 15) Starvation
    printf(" Starvation ");
else if (bmi >= 15.1) && (bmi <= 17.5) Anorexic
    printf(" Anorexic ");
else if (bmi >= 17.6) && (bmi <= 18.5) Underweight
    printf(" Underweight ");
else if (bmi >= 18.6) && (bmi <= 24.9) Ideal
    printf(" Ideal ");
else if (bmi >= 25) && (bmi <= 25.9) Overweight
    printf(" Overweight ");
else if (bmi >= 30) && (bmi <= 30.9) Obese
    printf(" Obese ");
else if (bmi >= 40) Morbidly Obese
    printf(" Morbidly Obese ");
else No BMI category
    printf(" No BMI category ");

    Search

```

CHAPTER 4 {E}

More complex decision making

Ex 1.

```
#include <stdio.h>
#include <conio.h>
void main()
{
    char n;
    clrscr();
    printf("Enter character");
    scanf("%c", &n);
    if (n > 97 && n < 123) {
        printf("lower case alphabet");
    } else {
        printf("Not a lower case alphabet");
    }
    getch();
}
```

Q.

```
#include <stdio.h>
#include <conio.h>
void main()
{
    char n;
    clrscr();
    printf("Enter a character");
    scanf("%c", &n);
    if ((n > 65 && n < 90) || (n > 97 && n < 123) ||
        (n > 48 && n < 57)) {
        printf("Not a special symbol");
    } else {
        printf("Special symbol");
    }
    getch();
}
```



(b) #include <stdio.h>

#include <conio.h>

void main()

{

int y;

clrscr();

printf("Enter a year");

scanf("%d", &y);

(y % 4 == 0 && y % 100 != 0 || y %

400 == 0) ? printf("Leap Year") :

: printf("Not a leap year");

getch();

}

(c) #include <stdio.h>

#include <conio.h>

void main()

{

int a, b, c;

clrscr();

printf("Enter three numbers");

scanf("%d %d %d", &a, &b, &c);

(a > b && a > c) ? printf("%d is greater", a) :

(b > a && b > c) ? printf("%d is greater", b) :

(c > a && c > b) ? printf("%d is greater", c) :

printf("%d is greater", a);

getch();

→

(d)

(e) #include <stdio.h>
#include <conio.h>
void main()
{
 float sal;
 printf("Enter the salary");
 scanf("%f", &sal);
 (sal < 40000 & sal > 25000) ? printf("Manager") : sal < 25000 && sal > 15000
 ? printf("Accountant") : printf("Clerk");
 getch();
}

Loop control instruction.



Ch-~~S~~ 5

(a) `#include <stdio.h>`
`#include <conio.h>`
`void main()`
 {
 int cm, nw, op, e = 1;
 printf("enter working hours");
 scanf("%d", &nw);
 while (e <= 10)
 {
 if (cm > 40)
 {
 nw = cm - 40;
 op = nw * 12;
 printf("O + P = %d", op);
 e = e + 1
 }
 else
 printf("No extra working now");
 getch();
 }

(b) `#include <stdio.h>`
`#include <conio.h>`
`void main()`
 {
 int i, n, f = 1;
 printf("Enter any number");
 scanf("%d", &n);
 i = 1;
 while (i <= n)
 {
 f = f * i;
 i++;
 }
 printf("Ans = %d", f);
 }

```
printf("Fact = %.d", f);
```

```
}
```

```
getch();
```

```
→
```

```
→
```

Q. #include <stdio.h>

```
#include <comio.h>
```

```
void main();
```

```
{
```

```
int b, e, i, P = 1;
```

```
clrscr();
```

```
printf("Enter base & exponent");
```

```
scanf("(%.d%.d)", &b, &e);
```

```
while (i <= e)
```

```
{
```

```
P = P * b;
```

```
i = i + 1;
```

```
} // loop ends
```

```
printf("Value = %.d", P);
```

```
getch();
```

```
→
```

Q. #include <stdio.h>

```
#include <comio.h>
```

```
void main();
```

```
int n;
```

```
clrscr();
```

a = 0;

while ($a \leq 255$)

2

Printf("lvalue and their character

= ' . % ' . C ' , " +));

 a = a + 1;

getch();

3

(inner
one)

a. Check armstrong no.

#include < stdio.h >

#include < conio.h >

void main()

4

int m, sum = 0, org(a);

clrscr();

printf(" enter 3 digit no.");

scanf(" %d ", &m);

org = m;

conine(m>0)

5

a = m % 10;

m = m / 10;

Sum = Sum + a * a * a;

6

if (org == sum)

printf(" number is armstrong");

else

printf(" no is not armstrong");

getch();

7

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

`int d, sum, i, n`

`for(i = 1; i <= 500; i++)`

`3 = i;`

`Sum = 0;`

`while (n > 0)`

`d = n % 10;`

`n = n / 10;`

`Sum = Sum + d * d * d;`

`if (sum == i)`

`printf("In %d", i);`

`getch();`

`}`

(g) #include <stdio.h>
#include <conio.h>
void main()
{
 int n, p = 0, m = 0, r = 0;
 clrscr();
 do
 {
 printf("Enter number :- ");
 scanf("%d", &n);
 if (n > 0)
 p++;
 else if (n < 0)
 m++;
 } while (r != 0);
 printf("Number of positive numbers = %d", p);
 printf("Number of negative numbers = %d", m);
}

else "do you want to continue enter

3++;

printf("In if you want to enter
more numbers press y or
in press any key to see
output");

ans = getch();

> conio (ans == 'y');

printf("In total positive number = %.d", p);

printf("In total negative number = %.d", ne);

printf("In total zero = %.d", z);

getch();

> // program ends here

(n) #include <stdio.h>

#include <conio.h>

void main()

&

scanf("Enter integer number");

int n, o, m; // n = number, o = sum of digits

clrscr(); // clear screen

printf("Enter integer number");

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

m = 1;

o = 0;

conio (n > 0)

&

o = o + n % 10;

n = n / 10;

m = m * 10;

>

```
printf("Octal equivalent = %.1f", 0);
```

```
getch();
```



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

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

```
void main()
```



```
int i, num, max, min, now, range;
```

```
printf("Enter the number of numbers you want to enter");
```

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

```
printf("Enter number");
```

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

```
min = max = num;
```

```
for(i=1; i<now; i++)
```



```
printf("Enter the number");
```

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

```
if (num > max)
```

```
max = num;
```

```
if (num < min)
```

```
min = num;
```



```
range = max - min;
```

```
printf("The range of the data is %d", range);
```

```
getch();
```



more complex repetition

Solution

Chapter - 6

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(Q) #include <stdio.h>

#include <conio.h>

void main()

{

int i, n;

clrscr();

printf("prime numbers between 1 to
300");

for(i=1;i<=300;i++)

{

p=0;

for(m=2;m*m<=i ; m++);

{

if(i%m==0) condition satisfied (S)

{

p++;

break;

}

if(p==0)

printf("%d", i);

getch();

(Q)

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(c)

```
#include <cs.h>
#include <conio.h>
void main()
{
    int i,j,k;
    for(i=1; i<=3; i++)
        for(j=1; j<=3; j++)
            for(k=1; k<=3; k++)
                if(i!=j & j!=k & k!=i)
                    printf("%d.%d.%d", i,j,k);
    getch();
}
```

(d) `#include <stdio.h>`
`#include <conio.h>`
`void main()`
X
`int i, n;`
`clrscr();`
`printf("Enter number for table");`
`scanf("%d", &n)`
`for(i=1; i<=10; i++)`
`printf("%d * %d = %d", n, i, n*i);`
`getch();`
→

(e) `#include <stdio.h>`
`#include <conio.h>`
`void main()`
X
`float y, u, i;`
`for(y=1; y<=6; y++)`
X
`for(u=5.5; u<=12.5; u=u+0.5)`
X
`i = 2 + (y + (0.5*u));`
`printf("In y = %.2f u = %.2f : - i = %.2f\n", y, u, i);`
→
→
`getch();`
→

(F) #include <stdio.h>
#include <conio.h>
#include <math.h>
void main()
{
 float P, r, t, i, a, b, C; // Declaring variables
 for (i = 1; i <= 10; i++) // Loop for 10 iterations
 {
 printf("Enter principal, rate,
 time and interest compound");
 scanf("%f %f %f %f", &P, &r, &t, &i);
 C = 1 + r * t; // Calculating compound factor
 b = pow(C, i); // Calculating amount
 a = P * b; // Calculating final amount
 printf("amount = %f", a);
 }
 getch(); // Waiting for user input
}

(G) #include <stdio.h>
#include <conio.h>
#include <math.h>
void main()
{
 float sum, a, n, i, r; // Declaring variables
 printf("Enter the value of n");
 scanf("%f", &n); // Inputting value of n
 r = (n - 1) / n; // Calculating r
 sum = r; // Initializing sum
 for (i = 1; i <= n - 1; i++) // Loop for n-1 iterations
 {
 sum = sum * r; // Calculating sum
 }
 printf("sum = %f", sum); // Outputting sum
}

```
for (i=1; i<=6; i++)  
{  
    for (a=2; i<=7; a++)  
    {  
        P = pow((n-1/m*a), a);  
        sum = sum + P;  
    }  
    printf(" Sum = %.f", sum);  
    getch();  
}
```

```
{H} #include <stdion>  
#include <conio.h>  
void main()  
{  
    int i, j, k;  
    for (i=1; i<=6; i++)  
    {  
        for (j=2; j<=7; j++)  
        {  
            P = pow((n-1/m*a), a);  
            sum = sum + P;  
        }  
        printf(" Sum = %.f", sum);  
        getch();  
    }  
}
```

(2) $P = P \times \frac{1}{2}$ $\Rightarrow P = P / 2$

(2) $P = P \times \frac{1}{2} \Rightarrow P = P / 2$

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$P = P / 2 \Rightarrow P = P / 2$

(i) #include <stdio.h>

#include <conio.h>

void main()

{

int P = 1000000; i;

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

{

P = P - P / 10;

printf("In year = %.d population = %.d",

10 - i, P);

}

getch();

1) `#include <stdio.h>`

`#include <conio.h>`

Platform friendly

Windows friendly

Mac OS X friendly

(Assignment of operators)

Platform friendly

Windows friendly

Mac OS X friendly

```
<K> #include <stdio.h>
#include <conio.h>
void main()
{
    int hr;
    for (hr = 0; hr < 24; hr++)
    {
        if (hr == 0)
            printf("It is 12 midnight");
        if (hr > 0 && hr < 12)
            printf("It is %d AM", hr);
        if (hr == 12)
            printf("It is 12 noon");
        if (hr > 12 && hr < 24)
            printf("It is %d PM", hr - 12);
    }
    getch();
}
```

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CHAPTER - 7

Ch-7 case control Instructions

(c) `#include <stdio.h>`

`#include`

`#include <c`

`void main`

{

`int ch, n, i, ... F=1, P=0
clrscr();`

`printf(" In 1. Factorial of a number`

`In 2. Prime or not`

`In 3. odd or even`

`In 4. exit");`

`printf(" Enter choice");`

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

`switch(ch)`

{

Case 1:

`printf(" In Enter a number:");`

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

`for(i=1; i<=n; i++)`

`F=F*i;`

`printf(" Factorial = %d", F);`

`break;`

Case 2:

`printf(" In Enter a number:");`

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

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

{

`if(n% i == 0)`

`P=P+1;`

`break;`

```
> if (f == 0)
printf("Prime Number");
else
printf("Not Prime Number");
break;
```

case 3: if (n%2 == 0)

```
printf("Enter a number");
scanf("%d", &n);
if (n%2 == 0) printf("even number")
else printf("odd number");
break;
```

case 4:

```
exit(0);
```

```
break;
```

default:

```
printf("Wrong choice");
break;
```

```
getenv();
goto n;
```

↓

↓

↓

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Q. #include <stdio.h>
#include <conio.h>
void main()
{
 int a, b;
 printf("Enter class and number of
 subjects failed");
 scanf("%d %d", &a, &b);
 switch(a)
{
 case 1:
 switch(b)
{
 case 0:
 printf("Case 1: You got 5 grace marks");
 break;
 default:
 printf("Case 1: You got grace marks");
 break;
 }
 case 2:
 printf("Case 2: You got 10 grace marks");
 break;
 case 3:
 printf("Case 3: You got 15 grace marks");
 break;
 default:
 printf("Case 4: You got 20 grace marks");
 break;
 }
}

Case 0:

```
printf("got 4 grace marks");  
break;
```

default:

```
printf("Not get grace marks");  
break;
```

>

```
break;
```

case 3:

```
switch(b)
```

x

case 1:

case 0:

```
printf("got 5 grace marks");  
break;
```

default:

```
printf("Not get grace marks");  
break;
```

>

```
break;
```

default:

```
printf("In wrong choice");
```

```
break;
```

>

```
getch();
```

→