*PR-3: Conditional Statements :-*

1. Write a C program to find number is positive, negative or zero.

#include<stdio.h>

int main() {

int a;

printf("Please enter of a: \n");

scanf("%d", &a);

a >= 0 ? printf("%d is Positive number\n",a) : printf("%d is Nagetive number\n",a);

return 0;

}

Output:-



2. Write a C program to find Grade from percentage. Here range is given below:

* 91 - 100    A
* 81 - <91    B
* 71 - <81    C
* 61 - <71    D
* 40 - <61    E
* <40            Failed

#include<stdio.h>

int main() {

float per;

printf("Please enter any charcter: ");

scanf("%f", &per);

if (per >=91 && per <= 100) {

printf("Grade: A");

} else if (per >= 81 && per <= 91) {

printf("Grade: B");

} else if (per >= 71 && per <= 81) {

printf("Grade: C");

} else if (per >= 61 && per <= 71) {

printf("Grade: D");

} else if (per >= 41 && per <= 61) {

printf("Grade: E");

} else if (per >= 0 && per <= 41) {

printf("Failed");

} else {

printf("Invalid Input");

}

return 0;

}

Output:-



3. Write a C program to find input is alphabet, number or special symbols.

#include<stdio.h>

int main() {

char ch;

printf("Please enter any charcter: ");

scanf("%c", &ch);

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

printf("Alphabet\n");

} else if (ch >= '0' && ch <= '9') {

printf("Number\n");

} else {

printf("Spacial charcter\n");

}

return 0;

}

Output:-



4. Write a C program to compare two number.

#include<stdio.h>

int main() {

int a, b;

printf("Pease enter any two number");

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

if (a > b) {

printf("%d is grater than %d",a , b);

} else if (a < b) {

printf("%d is less than %d",a , b);

} else {

printf("%d is equal to %d");

}

return 0;

}

Output:-



5. Write a C program to find leap year.

#include<stdio.h>

int main() {

int year;

printf("Please enter any Year:");

scanf("%d", &year);

if (year % 400 == 0) {

printf("Leep Year;");

} else if (year % 100 == 0) {

printf("Not Leep Year;");

} else if (year % 4 == 0) {

printf("Leep Year");

} else {

printf("Not Leep Year");

}

return 0;

}

Output:-



6. Write a C program to input electricity unit charges and calculate total electricity bill according to the given condition:For first 50 units Rs. 0.50/unit  
For next 100 units Rs. 0.75/unit  
For next 100 units Rs. 1.20/unit  
For unit above 250 Rs. 1.50/unit  
An additional surcharge of 20% is added to the bill.

#include<stdio.h>

int main() {

float unit , bill, total\_bill;

printf("Please enter Electrictiy Unit:");

scanf("%f", &unit);

if (unit >= 0 && unit <= 50) {

bill = unit \* 0.50;

} else if (unit > 50 && unit <= 150) {

bill = 50 \* 0.50 + (unit - 50) \* 0.70;

} else if (unit > 150 && unit <= 250) {

bill = 50 \* 0.50 + 100 \* 0.70 + (unit - 150) \* 1.00;

} else if (unit > 250) {

bill = 50 \* 0.50 + 100 \* 0.70 + 100 \* 1.00 + (unit - 250) \* 1.20;

}

total\_bill = bill + bill \* 0.20;

printf("Bill is: %f\n",bill);

printf("total Bill is: %f",total\_bill);

return 0;

}

Output:-



7. Write a C program that ask your gender and salary and give bonus according to following criteria:

* If you are male and your salary is less than 10000 than company will provide 2% bonus of your salary
* If you are female and your salary is less than 10000 than company will provide 3% bonus of your salary

#include<stdio.h>

int main() {

int salary, bonus, total\_salary;

char gender;

printf("Please enter your gender and salary");

scanf("%c %d", &gender, &salary);

if (gender == 'm' && salary < 10000) {

bonus = salary \* 0.02;

} else if (gender == 'f' && salary <10000) {

bonus = salary \* 0.03;

}

total\_salary = salary + bonus;

printf("Your salary is: %d\n", salary);

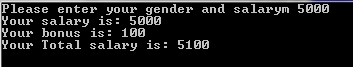
printf("Your bonus is: %d\n", bonus);

printf("Your Total salary is: %d\n", total\_salary);

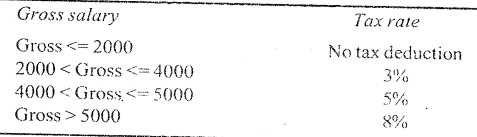
return 0;

}

Output:-



8. Write a C program to calculate tax from given image.



#include<stdio.h>

int main() {

int Gross,total;

printf("Please enter any number:");

scanf("%d", &Gross);

if (Gross <= 2000) {

printf("No tax deduction");

} else if (Gross > 2000 && Gross <= 4000) {

total = (Gross \* 3)/100;

} else if (Gross > 4000 && Gross <= 5000) {

total = (Gross \* 5)/100;

} else if (Gross > 5000) {

total = (Gross \* 8)/100;

}

printf("Ans is: %d",total);

return 0;

}

Output:-



9. Write a C program for calculate scholarship from given criteria:   
    Cast Criteria:

* Open: No Scholarship
* OBC: 25%
* SC: 50%
* ST: 100%

Grade Criteria:

* Your grade must be same or above B to eligible for scholarship.

Grade:

* A   (CGPA: 9+)
* B    (CGPA: 8.5+)
* C     (CGPA: 8+)
* D   (CGPA: 7.5+)

Output:-

10. Write a C program for calculate your net income from given criteria:

* If your net income is below 10000 you have not to pay any tax.
* If your net income is below 15000 you have to pay 10% tax.
* If your net income is above 15000 you have to pay 18% tax.

#include<stdio.h>

int main() {

int income, expenses, net\_income, Total\_net\_income, Tax;

printf("Please enter your Income:-");

scanf("%d", &income);

printf("Please enter your Expenses:-");

scanf("%d", &expenses);

net\_income = income - expenses;

if (net\_income >= 0 && net\_income <= 10000) {

printf("\nNot to Pay any Tax\n");

} else if (net\_income >= 10000 && net\_income <= 15000) {

// Tax = net\_income \* 0.10;

Total\_net\_income = net\_income - (Tax= net\_income \* 0.10);

} else if (net\_income > 15000) {

// Tax = net\_income \* 0.18;

Total\_net\_income = net\_income - (Tax=net\_income \* 0.18);

}

printf("Net Income is:- %d\n",net\_income);

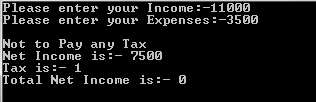
printf("Tax is:- %d\n",Tax);

printf("Total Net Income is:- %d\n",Total\_net\_income);

return 0;

}

Output:-



11. Write a C program to find out maximum from 3 numbers using nested if.

#include<stdio.h>

int main() {

int a, b, c;

printf("Please enter a, b, c:-");

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

if (a > b) {

if (a > c) {

printf("%d is maximum\n", a);

} else {

printf("%d is maximum\n", c);

}

} else {

if (b > c) {

printf("%d is maximum\n", b);

} else {

printf("%d is maximum\n", c);

}

}

return 0;

}

Output:-



12. Write a C program to find out maximum from 4 numbers using nested if.

#include<stdio.h>

int main() {

int a, b, c, d;

printf("please enter any fourth number: ");

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

if (a>b) {

if (a>c) {

if (a>d) {

printf("%d number is max",a);

} else {

printf("%d number is max",d);

}

} else {

if (c>d) {

printf("%d number is max",c);

} else {

printf("%d number is max",d);

}

}

} else {

if (b>c) {

if (b>d) {

printf("%d number is max",b);

} else {

printf("%d number is max",d);

}

} else {

if (c>d) {

printf("%d number is max",c);

} else {

printf("%d number is max",d);

}

}

}

return 0;

}

Output:-



13. Write a C program to find out minimum from 4 numbers using nested if.

#include<stdio.h>

int main() {

int a, b, c, d;

printf("please enter any fourth number: ");

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

if (a<b) {

if (a<c) {

if (a<d) {

printf("%d number is min",a);

} else {

printf("%d number is min",d);

}

} else {

if (c<d) {

printf("%d number is min",c);

} else {

printf("%d number is min",d);

}

}

} else {

if (b<c) {

if (b<d) {

printf("%d number is min",b);

} else {

printf("%d number is min",d);

}

} else {

if (c<d) {

printf("%d number is min:",c);

} else {

printf("%d number is min:",d);

}

}

}

return 0;

}

Output:-



14. Write a C program to find user is eligible for blood donation or not using nested if.

#include<stdio.h>

int main() {

int age, weight;

printf("Please enter your Age and weight:-");

scanf("%d %d", &age, &weight);

if (age >= 18) {

if (weight >= 50) {

printf("You are Eligibel\n");

} else {

printf("Your Weight is under 50.\n");

}

} else {

printf("Your Weight is Not under 50.\n");

}

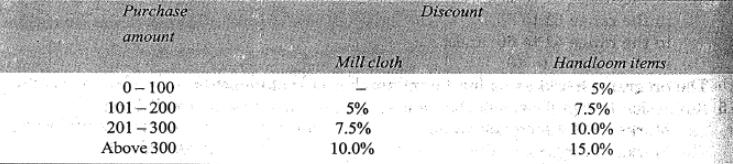
return 0;

}

Output:-



15. Write a C program to calculate sales discount from given image using nested if or (switch case and if condition).



#include<stdio.h>

int main() {

int purchase\_amount, tax\_amuont, total\_amuont;

char items;

printf("Please enter any Items And purchase\_amount");

scanf("%c %d", &items, &purchase\_amount);

switch (items) {

case 'M':

if (purchase\_amount >= 0 && purchase\_amount <= 100) {

tax\_amuont = purchase\_amount \* 0;

} else if (purchase\_amount >= 101 && purchase\_amount <= 200) {

tax\_amuont = purchase\_amount \* 0.05;

} else if (purchase\_amount >= 201 && purchase\_amount <= 300) {

tax\_amuont = purchase\_amount \* 0.075;

} else if (purchase\_amount > 300) {

tax\_amuont = purchase\_amount \* 0.1;

}

case 'H':

if (purchase\_amount >= 0 && purchase\_amount <= 100) {

tax\_amuont = purchase\_amount \* 0.05;

} else if (purchase\_amount >= 101 && purchase\_amount <= 200) {

tax\_amuont = purchase\_amount \* 0.075;

} else if (purchase\_amount >= 201 && purchase\_amount <= 300) {

tax\_amuont = purchase\_amount \* 0.1;

} else if (purchase\_amount > 300) {

tax\_amuont = purchase\_amount \* 0.15;

}

}

total\_amuont = purchase\_amount - tax\_amuont;

printf("Purchase Amount is:-%d\n",purchase\_amount);

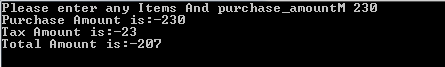
printf("Tax Amount is:-%d\n",tax\_amuont);

printf("Total Amount is:-%d\n",total\_amuont);

return 0;

}

Output:-



16. Reform 9th program using nested if.

Output:-

17. Write a C program to find day name using switch case.

#include<stdio.h>

int main() {

char ch;

printf("Please enter Day Name: ");

scanf("%c", &ch);

switch (ch) {

case 'M':

printf("Monday");

break;

case 'T':

printf("Tuseday");

break;

case 'W':

printf("Wedesday");

break;

case 't':

printf("Turshday");

break;

case 'F':

printf("Friday");

break;

case 'S':

printf("Seterday");

break;

case 's':

printf("Sunday");

break;

default:

printf("Invalid input");

break;

}

return 0;

}

Output:-



18. Write a C program to find month name from month number using switch case.

#include<stdio.h>

int main() {

int num;

printf("Please enter Day Name: ");

scanf("%d", &num);

switch (num) {

case 1:

printf("January");

break;

case 2:

printf("February");

break;

case 3:

printf("March");

break;

case 4:

printf("April");

break;

case 5:

printf("May");

break;

case 6:

printf("June");

break;

case 7:

printf("July");

break;

case 8:

printf("augest");

break;

case 9:

printf("september");

break;

case 10:

printf("Octomber");

break;

case 11:

printf("November");

break;

case 12:

printf("December");

break;

default:

printf("Invalid input");

break;

}

return 0;

}

Output:-



19. Reform 7th program using switch case and if condition.

#include<stdio.h>

int main() {

int salary, bonus, total\_salary;

char gender;

printf("Please enter your gender and salary");

scanf("%c %d", &gender, &salary);

switch (gender) {

case 'm':

if (gender == 'm' && salary < 10000) {

bonus = salary \* 0.02;

}

break;

case 'f':

if (gender == 'f' && salary < 10000) {

bonus = salary \* 0.03;

}

break;

}

total\_salary = salary + bonus;

printf("Your salary is: %d\n", salary);

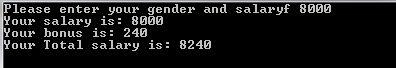
printf("Your bonus is: %d\n", bonus);

printf("Your Total salary is: %d\n", total\_salary);

return 0;

}

Output:-



20. Write a program to check whether a given number is divisible by 5 or not.

#include<stdio.h>

int main() {

int i,n;

printf("Please enter any number: ");

scanf("%d", &n);

printf("Numbers divisible by 5 are:");

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

if(i % 5 == 0){

printf("\n%d",i);

}

}

return 0;

}

Output:-

