#include<stdio.h>

#include<stdlib.h>

#include<conio.h>

void Time();

void Length();

void Temperature();

void Mass();

void Speed();

void areaConverter();

void volumeConverter();

void angleConverter();

void accelerationConverter();

void frequencyConverter();

void forceConverter();

int main(){

int cat;

char choice;

do{

do{

printf("\t\t\t\tWelcome To Unit Converter ");

printf("\nFrom the given categories choose the quantity whose unit you want to convert (enter the number) \n");

printf("1)Time");

printf("\n2)Length");

printf("\n3)Temperature");

printf("\n4)Mass");

printf("\n5)Speed");

printf("\n6)Area");

printf("\n7)Volume");

printf("\n8)Angle");

printf("\n9)Acceleration");

printf("\n10)Frequency");

printf("\n11)Force\n");

scanf("%d",&cat);

system("cls");

switch(cat){

case 1:

Time();

break;

case 2:

Length();

break;

case 3:

Temperature();

break;

case 4:

Mass();

break;

case 5:

Speed();

break;

case 6:

areaConverter();

break;

case 7:

volumeConverter();

break;

case 8:

angleConverter();

break;

case 9:

accelerationConverter();

break;

case 10:

frequencyConverter();

break;

case 11:

forceConverter();

break;

default:

printf("invalid input please select from given categories");

break;

}

}while(cat<1||cat>11);

printf("\n\aDo you want to calculate more (y/n)=");

scanf("%s",&choice);

if(choice=='n'||choice=='N'){

break;

}

if(choice>='A'&&choice!='N'&&choice!='Y'&&choice<='Z'){

printf("\nPlease enter the answer in Y or N= ");

scanf("%s",&choice);

}

if(choice>='a'&&choice!='n'&&choice!='y'&&choice<='z'){

printf("\nPlease enter the answer in y or n= ");

scanf("%s",&choice);

}

system("cls");

}while(choice=='y'||choice=='Y');

return 0;

}

///function for area///

void areaConverter(){

int from\_unit,to\_unit;

double mag,to\_mag;

printf("\t\t\t\tThe Area Units Converter\n");

printf("\nFrom which unit you want to convert your area from(enter the number)\n");

printf("\n");

do{

printf("1)square-kilometer\n");

printf("2)acre\n");

printf("3)are\n");

printf("4)square-meter\n");

printf("5)square-yards\n");

printf("6)yard\n");

printf("7)square-feet\n");

printf("8)square-decimeter\n");

printf("9)square-inch\n");

printf("10)square-centimeter\n");

scanf("%d",&from\_unit);

if(from\_unit>10){

printf("\nInvalid input select the given categories\n");

}

} while(from\_unit < 1 || from\_unit > 10);

system("cls");

switch(from\_unit){

case 1:

printf("\nIn which unit you want to convert your area from square-kilometer=\n");

break;

case 2:

printf("\nIn which unit you want to convert your area from acer=\n");

break;

case 3:

printf("\nIn which unit you want to convert your area from are=\n");

break;

case 4:

printf("\nIn which unit you want to convert your area from square-meter=\n");

break;

case 5:

printf("\nIn which unit you want to convert your area from square-yards=\n");

break;

case 6:

printf("\nIn which unit you want to convert your area yards\n");

break;

case 7:

printf("\nIn which unit you want to convert your area from square-feet=\n");

break;

case 8:

printf("\nIn which unit you want to convert your area from square-decimeter=\n");

break;

case 9:

printf("\nIn which unit you want to convert your area from square-inch=\n");

break;

case 10:

printf("\nIn which unit you want to convert your area from square-centimeter\n");

break;

default:

break;

}

printf("\n");

do{

printf("1)square-kilometer\n");

printf("2)acre\n");

printf("3)are\n");

printf("4)square-meter\n");

printf("5)square-yards\n");

printf("6)yard\n");

printf("7)square-feet\n");

printf("8)square-decimeter\n");

printf("9)square-inch\n");

printf("10)square-centimeter\n");

scanf("%d",&to\_unit);

if(to\_unit>10){

printf("\nInvalid input select the given categories\n");

}

}while(to\_unit < 1 || to\_unit > 10);

system("cls");

printf("\nEnter the magnitude in ");

switch(from\_unit){

case 1:

printf("square-kilometer= ");

break;

case 2:

printf("acre= ");

break;

case 3:

printf("are= ");

break;

case 4:

printf("square-meter= ");

break;

case 5:

printf("square-yard= ");

break;

case 6:

printf("yard= ");

break;

case 7:

printf("square-feet= ");

break;

case 8:

printf("square-decimeter= ");

break;

case 9:

printf("square-inch= ");

break;

case 10:

printf("square-centimeter= ");

break;

default:

break;

}

scanf("%lf",&mag);

double conArea[]={1,247.10538,10000,1000000,1195990.046,1307950.619,10763910.417,100000000,1550003100,10000000000};

to\_mag=(conArea[to\_unit-1]/conArea[from\_unit-1])\*mag;

printf("\nMagnitude in ");

switch(to\_unit){

case 1:

printf("square-kilometer= %lf",mag);

break;

case 2:

printf("acer= %lf",to\_mag);

break;

case 3:

printf("are= %lf",to\_mag);

break;

case 4:

printf("square-meter= %lf",to\_mag);

break;

case 5:

printf("square-yard= %lf",to\_mag);

break;

case 6:

printf("yard= %lf",to\_mag);

break;

case 7:

printf("square-feet= %lf",to\_mag);

break;

case 8:

printf("square-decimeter= %lf",to\_mag);

break;

case 9:

printf("square-inch= %lf",to\_mag);

break;

case 10:

printf("square-centimeter= %lf",to\_mag);

break;

}

}

///function for volume///

void volumeConverter(){

int from\_unit,to\_unit;

double mag,to\_mag;

printf("\t\t\t\tThe Volume Units Converter\n");

printf("\nFrom which unit you want to convert your volume from (enter the number)\n");

printf("\n");

do{

printf("1)cubic-meter\n");

printf("2)US barrels\n");

printf("3)cubic-foot\n");

printf("4)US gallons\n");

printf("5)cubic-decimeter/liter\n");

printf("6)US quart\n");

printf("7)fluid ounces\n");

printf("8)cubic-inches\n");

printf("9)US tablespoon\n");

printf("10)cubic-centimeter\n");

scanf("%d",&from\_unit);

if(from\_unit>10){

printf("\nInvalid input select the given categories\n");

}

} while(from\_unit < 1 || from\_unit > 10);

system("cls");

switch(from\_unit){

case 1:

printf("\nIn which unit you want to convert your volume from cubic-meter=\n");

break;

case 2:

printf("\nIn which unit you want to convert your volume from US barrels=\n");

break;

case 3:

printf("\nIn which unit you want to convert your volume from cubic-foot=\n");

break;

case 4:

printf("\nIn which unit you want to convert your volume from US gallons=\n");

break;

case 5:

printf("\nIn which unit you want to convert your volume from cubic-decimeter=\n");

break;

case 6:

printf("\nIn which unit you want to convert your volume from US quart=\n");

break;

case 7:

printf("\nIn which unit you want to convert your volume from fluid ounces=\n");

break;

case 8:

printf("\nIn which unit you want to convert your volume from cubic-inches=\n");

break;

case 9:

printf("\nIn which unit you want to convert your volume from US tablespoon=\n");

break;

case 10:

printf("\nIn which unit you want to convert your volume from cubic-centimeter=\n");

break;

default:

break;

}

printf("\n");

do{

printf("1)cubic-meter\n");

printf("2)US barrels\n");

printf("3)cubic-foot\n");

printf("4)US gallons\n");

printf("5)cubic-decimeter/liter\n");

printf("6)US quart\n");

printf("7)fluid ounces\n");

printf("8)cubic-inches\n");

printf("9)US tablespoon\n");

printf("10)cubic-centimeter\n");

scanf("%d",&to\_unit);

if(to\_unit>10){

printf("\nInvalid input select the given categories\n");

}

} while(to\_unit < 1 || to\_unit > 10);

system("cls");

printf("\nEnter the magnitude in ");

switch(from\_unit){

case 1:

printf("cubic-meter= ");

break;

case 2:

printf("US barrels= ");

break;

case 3:

printf("cubic-foot= ");

break;

case 4:

printf("US gallons= ");

break;

case 5:

printf("cubic-decimeter= ");

break;

case 6:

printf("US quart= ");

break;

case 7:

printf("fluid ounces= ");

break;

case 8:

printf("cubic-inches= ");

break;

case 9:

printf("US tablespoon= ");

break;

case 10:

printf("cubic-centimeter= ");

break;

default:

break;

}

scanf("%lf",&mag);

double convol[]={1,8.3864,35.15,264.17,1000,1056.6882,33814.023,61023.744,67628.045,1000000};

to\_mag=(convol[to\_unit-1]/convol[from\_unit-1])\*mag;

printf("\nMagnitude in ");

switch(to\_unit){

case 1:

printf("cubic-meter= %lf",to\_mag);

break;

case 2:

printf("US barrels= %lf",to\_mag);

break;

case 3:

printf("cubic-foot= %lf",to\_mag);

break;

case 4:

printf("US gallons= %lf",to\_mag);

break;

case 5:

printf("cubic-decimeter= %lf",to\_mag);

break;

case 6:

printf("US quart= %lf",to\_mag);

break;

case 7:

printf("fluid ounces= %lf",to\_mag);

break;

case 8:

printf("cubic-inches= %lf",to\_mag);

break;

case 9:

printf("US tablespoon= %lf",to\_mag);

break;

case 10:

printf("cubic-centimeter= %lf",to\_mag);

break;

}

}

///function for angle///

void angleConverter(){

int from\_unit;

printf("\t\t\t\tThe Angle Units Converter\n");

printf("\nFrom which unit you want to convert your angle from(enter the number)\n");

printf("\n");

do{

printf("1)revolutions\n");

printf("2)quater\n");

printf("3)sextant\n");

printf("4)radians\n");

printf("5)sign\n");

printf("6)degrees\n");

printf("7)gradians\n");

printf("8)milli radians\n");

printf("9)mil\n");

printf("10)minute of arc\n");

scanf("%d",&from\_unit);

if(from\_unit>10){

printf("\nInvalid input select the given categories\n");

}

} while(from\_unit < 1 || from\_unit > 10);

system("cls");

int to\_unit;

switch(from\_unit){

case 1:

printf("\nIn which unit you want to convert your angle from revolutions=\n");

break;

case 2:

printf("\nIn which unit you want to convert your angle from quater=\n");

break;

case 3:

printf("\nIn which unit you want to convert your angle from sextant=\n");

break;

case 4:

printf("\nIn which unit you want to convert your angle from radians=\n");

break;

case 5:

printf("\nIn which unit you want to convert your angle from sign=\n");

break;

case 6:

printf("\nIn which unit you want to convert your angle from degrees=\n");

break;

case 7:

printf("\nIn which unit you want to convert your angle from gradians=\n");

break;

case 8:

printf("\nIn which unit you want to convert your angle from mili radians=\n");

break;

case 9:

printf("\nIn which unit you want to convert your angle from mil=\n");

break;

case 10:

printf("\nIn which unit you want to convert your angle from minute of arc=\n");

break;

default:

break;

}

printf("\n");

do{

printf("1)revolutions\n");

printf("2)quater\n");

printf("3)sextant\n");

printf("4)radians\n");

printf("5)sign\n");

printf("6)degree\n");

printf("7)gradians\n");

printf("8)mili radians\n");

printf("9)mil\n");

printf("10)minute of arc\n");

scanf("%d",&to\_unit);

if(to\_unit>10){

printf("\nInvalid input select the given categories\n");

}

} while(to\_unit < 1 || to\_unit > 10);

system("cls");

double mag;

printf("\nEnter the magnitude in ");

switch(from\_unit){

case 1:

printf("revolutions= ");

break;

case 2:

printf("quater= ");

break;

case 3:

printf("sextant= ");

break;

case 4:

printf("radians= ");

break;

case 5:

printf("sign= ");

break;

case 6:

printf("degree= ");

break;

case 7:

printf("gradians= ");

break;

case 8:

printf("mili radians= ");

break;

case 9:

printf("mil= ");

break;

case 10:

printf("minute of arc= ");

break;

default:

break;

}

scanf("%lf",&mag);

double to\_mag=0;

double conAng[]={1,4,6,6.28319,12,360,400,6283.19,6400,21600};

to\_mag=(conAng[to\_unit-1]/conAng[from\_unit-1])\*mag;

printf("\nMagnitude in ");

switch(to\_unit){

case 1:

printf("revolutions= %lf",to\_mag);

break;

case 2:

printf("quater= %lf",to\_mag);

break;

case 3:

printf("sextant= %lf",to\_mag);

break;

case 4:

printf("radians= %lf",to\_mag);

break;

case 5:

printf("sign= %lf",to\_mag);

break;

case 6:

printf("degrees= %lf",to\_mag);

break;

case 7:

printf("gradians= %lf",to\_mag);

break;

case 8:

printf("mili radians= %lf",to\_mag);

break;

case 9:

printf("mil= %lf",to\_mag);

break;

case 10:

printf("minute of arc= %lf",to\_mag);

break;

}

}

///function for acceleration///

void accelerationConverter(){

int from\_unit;

printf("\t\t\t\tThe Acceleration Units Converter\n");

printf("\nFrom which unit you want to convert your acceleration from(enter the number)\n");

printf("\n");

do{

printf("1)miles/hour^2\n");

printf("2)kilometer/hour^2\n");

printf("3)kilometer/second^2\n");

printf("4)meter/second^2\n");

printf("5)meter/hour^2\n");

printf("6)miles/hour^2\n");

printf("7)centimeter/second^2\n");

printf("8)centimeter/hour^2\n");

printf("9)feet/hour^2\n");

printf("10)meter/minute^2\n");

scanf("%d",&from\_unit);

if(from\_unit>10){

printf("\nInvalid input select the given categories\n");

}

}while(from\_unit < 1 || from\_unit > 10);

system("cls");

int to\_unit;

switch(from\_unit){

case 1:

printf("\nIn which unit you want to convert your acc from miles/hour^2=\n");

break;

case 2:

printf("\nIn which unit you want to convert your acc from kilometer/hour^2=\n");

break;

case 3:

printf("\nIn which unit you want to convert your acc from kilometer/second^2=\n");

break;

case 4:

printf("\nIn which unit you want to convert your acc from meter/second^2=\n");

break;

case 5:

printf("\nIn which unit you want to convert your acc from meter/hour^2=\n");

break;

case 6:

printf("\nIn which unit you want to convert your acc from miles/hour^2=\n");

break;

case 7:

printf("\nIn which unit you want to convert your acc from centimeter/second^2=\n");

break;

case 8:

printf("\nIn which unit you want to convert your acc from centimeter/hour^2=\n");

break;

case 9:

printf("\nIn which unit you want to convert your acc from feet/hour^2=\n");

break;

case 10:

printf("\nIn which unit you want to convert your acc from meter/minute^2=\n");

break;

default:

break;

}

printf("\n");

do{

printf("1)miles/hour^2\n");

printf("2)kilometer/hour^2\n");

printf("3)kilometer/second^2\n");

printf("4)meter/second^2\n");

printf("5)meter/hour^2\n");

printf("6)miles/hour^2\n");

printf("7)centimeter/second^2\n");

printf("8)centimeter/hour^2\n");

printf("9)feet/hour^2\n");

printf("10)meter/minute^2\n");

scanf("%d",&to\_unit);

if(to\_unit>10){

printf("\nInvalid input select the given categories\n");

}

} while(to\_unit < 1 || to\_unit > 10);

system("cls");

double mag;

printf("\nEnter the magnitude in ");

switch(from\_unit){

case 1:

printf("miles/hour^2= ");

break;

case 2:

printf("kilometer/hour^2= ");

break;

case 3:

printf("kilometer/second^2= ");

break;

case 4:

printf("meter/second^2= ");

break;

case 5:

printf("meter/hour^2= ");

break;

case 6:

printf("miles/second^2= ");

break;

case 7:

printf("centimeter/second^2= ");

break;

case 8:

printf("centimeter/hour^2= ");

break;

case 9:

printf("feet/hour^2= ");

break;

case 10:

printf("meter/minute^2= ");

break;

default:

break;

}

scanf("%lf",&mag);

double to\_mag=0;

double conacc[]={1,1.60934,0.00044704,0.44704,1609.344,0.0002778,44.704,160934.4,5280,26.8224};

to\_mag=(conacc[to\_unit-1]/conacc[from\_unit-1])\*mag;

printf("\nMagnitude in ");

switch(to\_unit){

case 1:

printf("miles/hour^2=%lf",to\_mag);

break;

case 2:

printf("kilometer/hour^2= %lf",to\_mag);

break;

case 3:

printf("kilometer/second^2= %lf",to\_mag);

break;

case 4:

printf("meter/second^2= %lf",to\_mag);

break;

case 5:

printf("meter/hour^2= %lf",to\_mag);

break;

case 6:

printf("miles/second^2= %lf",to\_mag);

break;

case 7:

printf("centimeter/second^2= %lf",to\_mag);

break;

case 8:

printf("centimeter/hour^2= %lf",to\_mag);

break;

case 9:

printf("feet/hour^2= %lf",to\_mag);

break;

case 10:

printf("meter/minute^2= %lf",to\_mag);

break;

}

}

///function for frequency///

void frequencyConverter(){

int from\_unit;

printf("\t\t\t\tThe frequency Units Converter\n");

printf("\nFrom which unit you want to convert your frequency from(enter the number)\n");

printf("\n");

do{

printf("1)kilohertz\n");

printf("2)gigahertz\n");

printf("3)megahertz\n");

printf("4)hectohertz\n");

printf("5)dekahertz\n");

printf("6)cycle per second\n");

printf("7)hertz\n");

printf("8)decihertz\n");

printf("9)centihertz\n");

printf("10)millihertz\n");

scanf("%d",&from\_unit);

if(from\_unit>10){

printf("\nInvalid input select the given categories\n");

}

} while(from\_unit < 1 || from\_unit > 10);

system("cls");

int to\_unit;

switch(from\_unit){

case 1:

printf("\nIn which unit you want to convert your frequency from kilohertz=\n");

break;

case 2:

printf("\nIn which unit you want to convert your frequency from gigahertz=\n");

break;

case 3:

printf("\nIn which unit you want to convert your frequency from megahertz=\n");

break;

case 4:

printf("\nIn which unit you want to convert your frequency from hectohertz=\n");

break;

case 5:

printf("\nIn which unit you want to convert your frequency from dekahertz=\n");

break;

case 6:

printf("\nIn which unit you want to convert your frequency from cycle per second=\n");

break;

case 7:

printf("\nIn which unit you want to convert your frequency from hertz=\n");

break;

case 8:

printf("\nIn which unit you want to convert your frequency from decihertz=\n");

break;

case 9:

printf("\nIn which unit you want to convert your frequency from centihertz=\n");

break;

case 10:

printf("\nIn which unit you want to convert your frequency from millihertz=\n");

break;

default:

break;

}

printf("\n");

do{

printf("1)kilohertz\n");

printf("2)gigahertz\n");

printf("3)megahertz\n");

printf("4)hectohertz\n");

printf("5)dekahertz\n");

printf("6)cycle per second\n");

printf("7)hertz\n");

printf("8)decihertz\n");

printf("9)centihertz\n");

printf("10)millihertz\n");

scanf("%d",&to\_unit);

if(to\_unit>10){

printf("\nInvalid input select the given categories\n");

}

}while(to\_unit < 1 || to\_unit > 10);

system("cls");

double mag;

printf("\nEnter the magnitude in ");

switch(from\_unit){

case 1:

printf("kilohertz= ");

break;

case 2:

printf("gigahertz= ");

break;

case 3:

printf("megahertz= ");

break;

case 4:

printf("hectohertz= ");

break;

case 5:

printf("dekahertz= ");

break;

case 6:

printf("cycle per second= ");

break;

case 7:

printf("hertz= ");

break;

case 8:

printf("decihertz= ");

break;

case 9:

printf("centihertz= ");

break;

case 10:

printf("milihertz= ");

break;

default:

break;

}

scanf("%lf",&mag);

double to\_mag=0;

double confre[]={1,0.000001,0.001,10,100,1000,1000,10000,100000,1000000};

to\_mag=(confre[to\_unit-1]/confre[from\_unit-1])\*mag;

printf("\nMagnitude in ");

switch(to\_unit){

case 1:

printf("kilohertz= %lf",to\_mag);

break;

case 2:

printf("gigahertz= %lf",to\_mag);

break;

case 3:

printf("megahertz= %lf",to\_mag);

break;

case 4:

printf("hectohertz= %lf",to\_mag);

break;

case 5:

printf("dekahertz= %lf",to\_mag);

break;

case 6:

printf("cycle per second= %lf",to\_mag);

break;

case 7:

printf("hertz= %lf",to\_mag);

break;

case 8:

printf("decihertz= %lf",to\_mag);

break;

case 9:

printf("centihertz= %lf",to\_mag);

break;

case 10:

printf("milihertz= %lf",to\_mag);

break;

}

}

///function for force///

void forceConverter(){

int from\_unit;

printf("\t\t\t\tThe force Units Converter\n");

printf("\nFrom which unit you want to convert your force from(enter the number)\n");

printf("\n");

do{

printf("1)kilonewton\n");

printf("2)newton\n");

printf("3)pound-force(lbf)\n");

printf("4)kilogram-force\n");

printf("5)poundal\n");

printf("6)gram-force\n");

printf("7)kip\n");

printf("8)ton-force\n");

printf("9)ounce force\n");

printf("10)dekanewton\n");

scanf("%d",&from\_unit);

if(from\_unit>10){

printf("\nInvalid input select the given categories\n");

}

} while(from\_unit < 1 || from\_unit > 10);

system("cls");

int to\_unit;

switch(from\_unit){

case 1:

printf("\nIn which unit you want to convert your force from kilonewton=\n");

break;

case 2:

printf("\nIn which unit you want to convert your force from newton=\n");

break;

case 3:

printf("\nIn which unit you want to convert your force from pound-force(lbf)=\n");

break;

case 4:

printf("\nIn which unit you want to convert your force from kilogram-force=\n");

break;

case 5:

printf("\nIn which unit you want to convert your force from poundal=\n");

break;

case 6:

printf("\nIn which unit you want to convert your force from gram-force=\n");

break;

case 7:

printf("\nIn which unit you want to convert your force from kip=\n");

break;

case 8:

printf("\nIn which unit you want to convert your force from ton-force=\n");

break;

case 9:

printf("\nIn which unit you want to convert your force from ounce force=\n");

break;

case 10:

printf("\nIn which unit you want to convert your force from dekanewton=\n");

break;

default:

break;

}

printf("\n");

do{

printf("1)kilonewton\n");

printf("2)newton\n");

printf("3)pound-force(lbf)\n");

printf("4)kilogram-force\n");

printf("5)poundal\n");

printf("6)gram=force\n");

printf("7)kip\n");

printf("8)ton-force\n");

printf("9)ounce force\n");

printf("10)dekanewton\n");

scanf("%d",&to\_unit);

if(to\_unit>10){

printf("\nInvalid input select the given categories\n");

}

} while(to\_unit < 1 || to\_unit > 10);

system("cls");

double mag;

printf("\nEnter the magnitude in ");

switch(from\_unit){

case 1:

printf("kilonewton= ");

break;

case 2:

printf("newton= ");

break;

case 3:

printf("pound-force(lbf)= ");

break;

case 4:

printf("kilogram-force= ");

break;

case 5:

printf("poundal= ");

break;

case 6:

printf("gram=force= ");

break;

case 7:

printf("kip= ");

break;

case 8:

printf("ton-force= ");

break;

case 9:

printf("ounce force= ");

break;

case 10:

printf("dekanewton= ");

break;

default:

break;

}

scanf("%lf",&mag);

double to\_mag=0;

double confor[]={1,1000,224.8089,101.9716213,7233.018512,101971.6213,0.2248089431,0.1003611353,3596.9430896,100};

to\_mag=(confor[to\_unit-1]/confor[from\_unit-1])\*mag;

printf("\nMagnitude in ");

switch(to\_unit){

case 1:

printf("kilonewton= %lf",to\_mag);

break;

case 2:

printf("newton= %lf",to\_mag);

break;

case 3:

printf("pound-force(lbf)= %lf",to\_mag);

break;

case 4:

printf("kilogram-force= %lf",to\_mag);

break;

case 5:

printf("poundal= %lf",to\_mag);

break;

case 6:

printf("gram-force= %lf",to\_mag);

break;

case 7:

printf("kip= %lf",to\_mag);

break;

case 8:

printf("ton-force= %lf",to\_mag);

break;

case 9:

printf("ounce force= %lf",to\_mag);

break;

case 10:

printf("deka newton= %lf",to\_mag);

break;

}

}

void Time(){

float answer, magnitude;

int convertunit, convertedunit;

printf("Select a unit to convert from : \n");

printf("1. Hour\n");

printf("2. Minute\n");

printf("3. Second\n");

fflush(stdin);

printf("Option : ");

scanf("%d",&convertunit);

switch(convertunit){

case 1 : printf("Select a unit to convert to : \n");

printf("1. Hour\n");

printf("2. Minute\n");

printf("3. Second\n");

printf("Option : ");

scanf("%d",&convertedunit);

switch(convertedunit){

case 1: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

printf("%.2f hour(s) are equal to %.2f hours\n",magnitude, magnitude);

break;

case 2: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

answer = magnitude \* 60;

printf("%.2f hour(s) are equal to %.2f minutes\n",magnitude, answer);

break;

case 3: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

answer = magnitude \* 3600;

printf("%.2f hour(s) are equal to %.2f seconds\n",magnitude, answer);

break;

}

break;

case 2 : printf("Select a unit to convert to : \n");

printf("1. Hour\n");

printf("2. Minute\n");

printf("3. Second\n");

printf("Option : ");

scanf("%d",&convertedunit);

switch(convertedunit){

case 2: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

printf("%.2f minute(s) are equal to %.2f minutes\n",magnitude, magnitude);

break;

case 1: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

answer = magnitude / 60;

printf("%.2f minute(s) are equal to %.2f hours\n",magnitude, answer);

break;

case 3: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

answer = magnitude \* 60;

printf("%.2f minute(s) are equal to %.2f seconds\n",magnitude, answer);

break;

}

break;

case 3 : printf("Select a unit to convert to : \n");

printf("1. Hour\n");

printf("2. Minute\n");

printf("3. Second\n");

printf("Option : ");

scanf("%d",&convertedunit);

switch(convertedunit){

case 3: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

printf("%.2f second(s) are equal to %.2f seconds\n",magnitude, magnitude);

break;

case 1: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

answer = magnitude / 3600;

printf("%.2f second(s) are equal to %.2f hours\n",magnitude, answer);

break;

case 2: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

answer = magnitude / 60;

printf("%.2f second(s) are equal to %.2f minutes\n",magnitude, answer);

break;

}

break;

}

}

void Length(){

float answer, magnitude;

int convertunit, convertedunit;

printf("Select a unit to convert from : \n");

printf("1. Kilometers\n");

printf("2. Meters\n");

printf("3. Centimeters\n");

printf("4. Millimeters\n");

printf("5. Yards\n");

printf("6. Feet\n");

printf("7. Inches\n");

fflush(stdin);

printf("Option : ");

scanf("%d",&convertunit);

switch(convertunit){

case 1 : printf("Select a unit to convert to : \n");

printf("1. Kilometers\n");

printf("2. Meters\n");

printf("3. Centimeters\n");

printf("4. Millimeters\n");

printf("5. Yards\n");

printf("6. Feet\n");

printf("7. Inches\n");

printf("Option : ");

scanf("%d",&convertedunit);

switch(convertedunit){

case 1: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

printf("%.2f Kilometers(s) are equal to %.2f Kilometers\n",magnitude, magnitude);

break;

case 2: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

answer = magnitude \* 1000;

printf("%.2f Kilometers(s) are equal to %.2f meters\n",magnitude, answer);

break;

case 3: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

answer = magnitude\*100000;

printf("%.2f Kilometers(s) are equal to %.2f centimeters\n",magnitude, answer);

break;

case 4: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

answer = magnitude\*1000000;

printf("%.2f Kilometers(s) are equal to %.2f millimeters\n",magnitude, answer);

break;

case 5: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

answer = magnitude\*1093.61;

printf("%.2f Kilometers(s) are equal to %.2f yards\n",magnitude, answer);

break;

case 6: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

answer = magnitude\*3280.84;

printf("%.2f Kilometers(s) are equal to %.2f feet\n",magnitude, answer);

break;

case 7: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

answer = magnitude\*39370.71;

printf("%.2f Kilometers(s) are equal to %.2f inches\n",magnitude, answer);

break;

}

break;

case 2 : printf("Select a unit to convert to : \n");

printf("1. Kilometers\n");

printf("2. Meters\n");

printf("3. Centimeters\n");

printf("4. Millimeters\n");

printf("5. Yards\n");

printf("6. Feet\n");

printf("7. Inches\n");

printf("Option : ");

scanf("%d",&convertedunit);

switch(convertedunit){

case 2: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

printf("%.2f meters(s) are equal to %.2f meters\n",magnitude, magnitude);

break;

case 1: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

answer = magnitude / 1000;

printf("%.2f meters(s) are equal to %.2f kilometers\n",magnitude, answer);

break;

case 3: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

answer = magnitude\*100;

printf("%.2f meters(s) are equal to %.2f centimeters\n",magnitude, answer);

break;

case 4: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

answer = magnitude\*1000;

printf("%.2f meters(s) are equal to %.2f millimeters\n",magnitude, answer);

break;

case 5: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

answer = magnitude\*1.09361;

printf("%.2f meters(s) are equal to %.2f yards\n",magnitude, answer);

break;

case 6: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

answer = magnitude\*3.28084;

printf("%.2f meters(s) are equal to %.2f feet\n",magnitude, answer);

break;

case 7: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

answer = magnitude\*39.37071;

printf("%.2f meters(s) are equal to %.2f inches\n",magnitude, answer);

break;

}

break;

case 3 : printf("Select a unit to convert to : \n");

printf("1. Kilometers\n");

printf("2. Meters\n");

printf("3. Centimeters\n");

printf("4. Millimeters\n");

printf("5. Yards\n");

printf("6. Feet\n");

printf("7. Inches\n");

printf("Option : ");

scanf("%d",&convertedunit);

switch(convertedunit){

case 3: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

printf("%.2f centimeters(s) are equal to %.2f centimeters\n",magnitude, magnitude);

break;

case 1: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

answer = magnitude / 100000;

printf("%.2f centimeters(s) are equal to %.2f kilometers\n",magnitude, answer);

break;

case 2: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

answer = magnitude/100;

printf("%.2f centimeters(s) are equal to %.2f meters\n",magnitude, answer);

break;

case 4: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

answer = magnitude\*10;

printf("%.2f centimeters(s) are equal to %.2f millimeters\n",magnitude, answer);

break;

case 5: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

answer = magnitude\*0.0109361;

printf("%.2f centimeters(s) are equal to %.2f yards\n",magnitude, answer);

break;

case 6: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

answer = magnitude\*0.0328084;

printf("%.2f centimeters(s) are equal to %.2f feet\n",magnitude, answer);

break;

case 7: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

answer = magnitude\*0.3937071;

printf("%.2f centimeters(s) are equal to %.2f inches\n",magnitude, answer);

break;

}

break;

case 4 : printf("Select a unit to convert to : \n");

printf("1. Kilometers\n");

printf("2. Meters\n");

printf("3. Centimeters\n");

printf("4. Millimeters\n");

printf("5. Yards\n");

printf("6. Feet\n");

printf("7. Inches\n");

printf("Option : ");

scanf("%d",&convertedunit);

switch(convertedunit){

case 4: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

printf("%.2f millimeters(s) are equal to %.2f millimeters\n",magnitude, magnitude);

break;

case 1: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

answer = magnitude / 1000000;

printf("%.2f millimeters(s) are equal to %.2f kilometers\n",magnitude, answer);

break;

case 2: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

answer = magnitude/1000;

printf("%.2f millimeters(s) are equal to %.2f meters\n",magnitude, answer);

break;

case 3: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

answer = magnitude/10;

printf("%.2f millimeters(s) are equal to %.2f centimeters\n",magnitude, answer);

break;

case 5: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

answer = magnitude\*0.00109361;

printf("%.2f millimeters(s) are equal to %.2f yards\n",magnitude, answer);

break;

case 6: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

answer = magnitude\*0.00328084;

printf("%.2f millimeters(s) are equal to %.2f feet\n",magnitude, answer);

break;

case 7: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

answer = magnitude\*0.03937071;

printf("%.2f millimeters(s) are equal to %.2f inches\n",magnitude, answer);

break;

}

break;

case 5 : printf("Select a unit to convert to : \n");

printf("1. Kilometers\n");

printf("2. Meters\n");

printf("3. Centimeters\n");

printf("4. Millimeters\n");

printf("5. Yards\n");

printf("6. Feet\n");

printf("7. Inches\n");

printf("Option : ");

scanf("%d",&convertedunit);

switch(convertedunit){

case 5: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

printf("%.2f yards(s) are equal to %.2f yards\n",magnitude, magnitude);

break;

case 1: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

answer = magnitude \* 0.0009144;

printf("%.2f yards(s) are equal to %.2f kilometers\n",magnitude, answer);

break;

case 2: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

answer = magnitude\*0.9144;

printf("%.2f yards(s) are equal to %.2f meters\n",magnitude, answer);

break;

case 3: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

answer = magnitude \* 91.44;

printf("%.2f yards(s) are equal to %.2f centimeters\n",magnitude, answer);

break;

case 4: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

answer = magnitude\* 914.4;

printf("%.2f yards(s) are equal to %.2f millimeters\n",magnitude, answer);

break;

case 6: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

answer = magnitude\*3;

printf("%.2f yards(s) are equal to %.2f feet\n",magnitude, answer);

break;

case 7: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

answer = magnitude\*36;

printf("%.2f yards(s) are equal to %.2f inches\n",magnitude, answer);

break;

}

break;

case 6 : printf("Select a unit to convert to : \n");

printf("1. Kilometers\n");

printf("2. Meters\n");

printf("3. Centimeters\n");

printf("4. Millimeters\n");

printf("5. Yards\n");

printf("6. Feet\n");

printf("7. Inches\n");

printf("Option : ");

scanf("%d",&convertedunit);

switch(convertedunit){

case 6: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

printf("%.2f feet(s) are equal to %.2f feet\n",magnitude, magnitude);

break;

case 1: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

answer = magnitude \* 0.0003048;

printf("%.2f feet(s) are equal to %.2f kilometers\n",magnitude, answer);

break;

case 2: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

answer = magnitude\*0.3048;

printf("%.2f feet(s) are equal to %.2f meters\n",magnitude, answer);

break;

case 3: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

answer = magnitude \* 30.48;

printf("%.2f feet(s) are equal to %.2f centimeters\n",magnitude, answer);

break;

case 4: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

answer = magnitude\* 304.8;

printf("%.2f feet(s) are equal to %.2f millimeters\n",magnitude, answer);

break;

case 5: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

answer = magnitude\*0.333333;

printf("%.2f feet(s) are equal to %.2f yards\n",magnitude, answer);

break;

case 7: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

answer = magnitude\*12;

printf("%.2f feet(s) are equal to %.2f inches\n",magnitude, answer);

break;

}

break;

case 7 : printf("Select a unit to convert to : \n");

printf("1. Kilometers\n");

printf("2. Meters\n");

printf("3. Centimeters\n");

printf("4. Millimeters\n");

printf("5. Yards\n");

printf("6. Feet\n");

printf("7. Inches\n");

printf("Option : ");

scanf("%d",&convertedunit);

switch(convertedunit){

case 7: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

printf("%.2f inch(es) are equal to %.2f inches\n",magnitude, magnitude);

break;

case 1: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

answer = magnitude \* 0.000025;

printf("%.2f inch(es) are equal to %.2f kilometers\n",magnitude, answer);

break;

case 2: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

answer = magnitude\*0.0254;

printf("%.2f inche(es) are equal to %.2f meters\n",magnitude, answer);

break;

case 3: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

answer = magnitude \* 2.54;

printf("%.2f inch(es) are equal to %.2f centimeters\n",magnitude, answer);

break;

case 4: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

answer = magnitude\* 25.4;

printf("%.2f inch(es) are equal to %.2f millimeters\n",magnitude, answer);

break;

case 5: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

answer = magnitude\*0.0277778;

printf("%.2f inch(es) are equal to %.2f yards\n",magnitude, answer);

break;

case 6: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

answer = magnitude\*0.0833333;

printf("%.2f inch(es) are equal to %.2f feet\n",magnitude, answer);

break;

}

break;

}

}

void Temperature(){

float answer, magnitude;

int convertunit, convertedunit;

printf("Select a unit to convert from : \n");

printf("1. Celsius\n");

printf("2. Fahrenheit\n");

printf("3. Kelvin\n");

fflush(stdin);

printf("Option : ");

scanf("%d",&convertunit);

switch(convertunit){

case 1 : printf("Select a unit to convert to : \n");

printf("1. Celsius\n");

printf("2. Fahrenheit\n");

printf("3. Kelvin\n");

printf("Option : ");

scanf("%d",&convertedunit);

switch(convertedunit){

case 1: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

printf("%.2f Celsius are equal to %.2f Celsius\n",magnitude, magnitude);

break;

case 2: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

answer = (magnitude\*9/5) + 32;

printf("%.2f Celsius are equal to %.2f Fahrenheit\n",magnitude, answer);

break;

case 3: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

answer = magnitude + 273.15;

printf("%.2f Celsius are equal to %.2f Kelvin\n",magnitude, answer);

break;

}

break;

case 2 : printf("Select a unit to convert to : \n");

printf("1. Celsius\n");

printf("2. Fahrenheit\n");

printf("3. Kelvin\n");

printf("Option : ");

scanf("%d",&convertedunit);

switch(convertedunit){

case 2: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

printf("%.2f Fahrenheit are equal to %.2f Fahrenheit\n",magnitude, magnitude);

break;

case 1: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

answer = (magnitude-32)\*5/9;

printf("%.2f Fahrenheit are equal to %.2f Celsius\n",magnitude, answer);

break;

case 3: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

answer = ((magnitude-32)\*5/9)+273.15;

printf("%.2f Fahrenheit are equal to %.2f Kelvin\n",magnitude, answer);

break;

}

break;

case 3 : printf("Select a unit to convert to : \n");

printf("1. Celsius\n");

printf("2. Fahrenheit\n");

printf("3. Kelvin\n");

printf("Option : ");

scanf("%d",&convertedunit);

switch(convertedunit){

case 3: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

printf("%.2f Kelvin are equal to %.2f Kelvin\n",magnitude, magnitude);

break;

case 1: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

answer = magnitude-273.15;

printf("%.2f Kelvin are equal to %.2f Celsius\n",magnitude, answer);

break;

case 2: printf("Enter the magnitude : ");

scanf("%f",&magnitude);

answer = ((magnitude-273.15)\*9/5)+32;

printf("%.2f Kelvin are equal to %.2f Fahrenheit\n",magnitude, answer);

break;

}

break;

}

}

void Mass() {

char sub\_choice;

float mass;

printf("Mass Converter Menu:\n");

printf("Enter your choice:\n");

printf("1. Kilograms to Grams\n");

printf("2. Grams to Kilograms\n");

printf("3. Kilograms to Tonnes\n");

printf("4. Tonnes to Kilograms\n");

printf("5. Kilograms to Ounces\n");

printf("6. Ounces to Kilograms\n");

printf("7. Kilograms to Pounds\n");

printf("8. Pounds to Kilograms\n");

fflush(stdin);

sub\_choice = getchar();

switch (sub\_choice) {

case '1':

printf("Enter mass in kilograms:\n");

scanf("%f", &mass);

mass = mass \* 1000;

printf("Converted mass to Grams: %.3f g\n", mass);

break;

case '2':

printf("Enter mass in grams:\n");

scanf("%f", &mass);

mass = mass / 1000;

printf("Converted mass to Kilograms: %.3f kg\n", mass);

break;

case '3':

printf("Enter mass in kilograms:\n");

scanf("%f", &mass);

mass = mass / 1000;

printf("Converted mass to Tonnes: %.3f t\n", mass);

break;

case '4':

printf("Enter mass in Tonnes:\n");

scanf("%f", &mass);

mass = mass \* 1000;

printf("Converted mass to Kilograms: %.3f kg\n", mass);

break;

case '5':

printf("Enter mass in Kilograms:\n");

scanf("%f", &mass);

mass = mass \* 35.27396;

printf("Converted mass to Ounces: %.3f oz\n", mass);

break;

case '6':

printf("Enter mass in ounces:\n");

scanf("%f", &mass);

mass = mass / 35.27396;

printf("Converted mass to Kilograms: %.3f kg\n", mass);

break;

case '7':

printf("Enter mass in Kilograms:\n");

scanf("%f", &mass);

mass = mass \* 2.20462;

printf("Converted mass to Pounds: %.3f lb\n", mass);

break;

case '8':

printf("Enter mass in Pounds:\n");

scanf("%f", &mass);

mass = mass / 2.20462;

printf("Converted mass to Kilograms: %.3f lb\n", mass);

break;

default:

printf("INVALID CHOICE\n");

break;

}

}

void Speed(){

char sub\_choice;

float speed;

printf("Speed Converter Menu:\n");

printf("Enter your choice 1 to 4:\n");

printf("1. m/s to km/h\n");

printf("2. km/h to m/s\n");

printf("3. miles/s to miles/h\n");

printf("4. miles/h to miles/s\n");

fflush(stdin);

sub\_choice=getchar();

switch(sub\_choice){

case '1':

printf("Conversion from m/s to km/h\n");

printf("Enter speed in m/s:\n");

scanf("%f", &speed);

speed=speed\*3.6;

printf("Converted speed to Kilometers per hour: %.3f km/h\n", speed);

break;

case '2':

printf("Conversion from km/h to m/s\n");

printf("Enter speed in km/h:\n");

scanf("%f", &speed);

speed=speed/3.6;

printf("Converted speed to Meters per second: %.3f m/s\n", speed);

break;

case '3':

printf("Conversion from m/s to m/h\n");

printf("Enter speed in m/s:\n");

scanf("%f", &speed);

speed=speed\*3600/1609.344;

printf("Converted speed to Miles per hour: %.3f mph\n", speed);

break;

case '4':

printf("Conversion from miles/h to miles/s\n");

printf("Enter speed in mph:\n");

scanf("%f", &speed);

speed=speed/3600\*1609.344;

printf("Converted speed to Meters per second: %.3f mps\n", speed);

break;

default:

printf("INVALID CHOICE\n");

break;

}

}