

***Problem set 02.***

***\*\*\*\*Write a program that will take weight input in mg and output the weight in kg g and mg Example: 1001000 mg\*\*\*\****

#include<iostream>  
using namespace std;  
int main() {  
 int a,kg,g,mg;  
 cout<<"please input the weight in mg"<<endl;  
 cin>>a;  
 kg=a/1000000;  
 g=(a%1000000)/1000;  
 mg=(a%1000000)%1000;  
 cout<< kg << "Kg "<< g <<"g "<< mg <<"mg"<<endl;  
 return 0;  
}

***\*\*\*Write a program in C++ that takes 3 input from the user and prints the sum, difference and product\*\*\****

#include <iostream>  
using namespace std;  
int main() {  
 int x,y,z,sum,difference,product;  
 cout<<"please enter three number"<<endl;  
 cin>>x>>y>>z;  
 sum=x+y+z;  
 difference=x-y-z;  
 product=x\*y\*z;  
 cout<<"The sum of the given number is "<<sum<<endl;  
 cout<<"The difference of the given number is "<<difference<<endl;  
 cout<<"The product of the given number is "<<product<<endl;  
 return 0;  
}

***\*\*\*Write a program that takes 2 input from the user and prints the quotient and remainder (you must remember what we did in the class, Typecasting) \*\*\****

#include <iostream>  
using namespace std;  
int main() {  
 int x, y, remainder, quotient;  
 cout << "please enter two number" << endl;  
 cin >> x >> y;  
 quotient = float(x)/y;  
 remainder = x%y;  
 cout << "The quotient of the given number is " << quotient << endl;  
 cout << "The remainder of the given number is " << remainder << endl;  
 return 0;  
}

***1. Write a program that takes the radius of a circle from the user and prints the area and circumference of the circle.***

#include<iostream>  
using namespace std;  
int main() {  
 float r,area,cir, pi=3.1416;  
 cout<<"please input the value of radius"<<endl;  
 cin>>r;  
 area=pi\*r\*r;  
 cir=2\*pi\*r;  
 cout<<"\n the area of this circle is="<<area;  
 cout<<"\n the circumference of this circle is="<<cir;  
 return 0;  
}

***2. Write a program that will take the length and width of a rectangle from the user and prints the area and perimeter of the rectangle.***

#include<iostream>  
using namespace std;  
int main() {  
 int l, w, area, perimeter;  
 cout<<"please input the length & width of the rectangle in integer value"<<endl;  
 cin>>l>>w;  
 area=l\*w;  
 perimeter=2\*(l+w);  
 cout<<"\n the area of this rectangle is="<<area;  
 cout<<"\n the perimeter of this rectangle is="<<perimeter;  
 return 0;  
}

***3. Write a program that will take the height and base of triangle from the user and prints the area of the triangle****.*

#include<iostream>  
using namespace std;  
int main() {  
 float height, base, area;  
 cout<<"please input the height & base of the triangle"<<endl;  
 cin>>height>>base;  
 area=.5\*height\*base;  
 cout<<"\n the area of this rectangle is="<<area;  
 return 0;  
}

***4. Write a program that takes the height of the user in meter and converts it to feet. (1 inch = 2.54 cm, 1 foot = 12 inch).***

#include<iostream>  
using namespace std;  
int main() {  
 float height,inch,feet ;  
 cout<<"please input your height in meter"<<endl;  
 cin>>height;  
 inch=(height\*100)/2.54;  
 feet=inch/12;  
 cout<<"\n your height in feet is="<<feet;  
 return 0;  
}

***5. Write a program that takes a temperature input in Fahrenheit and displays the temperature in Celsius and in Kelvin. Use the conversion formulae 5(𝐹 − 32) = 9𝐶 and 𝐶 = 𝐾 − 273.15****.*

#include <iostream>  
using namespace std;  
int main() {  
 float F,celsius,kelvin;  
 cout<<"please Input the temperature in Fahrenheit"<<endl;  
 cin>>F;  
 celsius=(5\*(F-32))/9;  
 kelvin=(celsius+273.15);  
 cout<<"The temperature in celsius is "<<celsius<<endl;  
 cout<<"The temperature in kelvin is "<<kelvin<<endl;  
 return 0;  
}

***6. Write a program that converts the number of days into month and years. For example, if the user inputs 813 days, the program prints: 2 years 2 months 23 days. (do not worry about leap year and you can calculate using 1 month = 30 days)***

#include <iostream>  
using namespace std;  
int main() {  
 int x, year, month, days;  
 cout << "please Input the value in days" << endl;  
 cin >> x;  
 year = x / 365;  
 month = (x % 365) / 30;  
 days = (x % 365) % 30;  
 cout<< year<< " years "<< month<< " months "<<days <<" days "<<endl;  
 return 0;  
}

***7. Write a program that takes the number of hours as input and displays the equivalent number of weeks, days, and hours. For example, if the user inputs 4000 hours, the program displays 23 weeks, 5 days and 16 hours.***

#include <iostream>  
using namespace std;  
int main () {  
 int x, week , day , hour;  
 cout << "please Input the value in hours:";  
 cin>>x;  
 week = x/168;  
 day =(x%168)/24;  
 hour=((x%168)%24);  
 cout <<week <<" Weeks, "<<day <<" Days and "<<hour<< " Hours."<<endl;  
 return 0;  
}

***8. Write a program that swaps (exchanges) the values of two variables***

#include <iostream>  
using namespace std;  
int main()  
{  
 int x,y , swap;  
 cout<<"please input two numbers"<<endl;  
 cin>>x>>y;  
 cout<<"Before swapping "<<" x= "<<x<<" y= "<<y<<endl;  
 swap = x;  
 x = y;  
 y = swap;  
 cout<<" After swapping "<<" x= "<<x<<" y= "<<y<< endl;  
 return 0;  
}

*9. Write a program that swaps the values of two variables without using a 3rd variable.*

#include<iostream>  
using namespace std;  
int main() {  
 int a,b;  
 cout<<"please input two number"<<endl;  
 cin>>a>>b;  
 a=a+b;  
 b=a-b;  
 a=a-b;  
 cout<<" After swapping a= "<<a<<" b= "<<b<<endl;  
 return 0;  
}

***10. Write a program that takes a 3-digit positive integer from the user and then prints the reversed number. For example, if the user enters 289, the program prints 982.***

#include<iostream>  
using namespace std;  
  
int main(){  
 int x, modulus, left, y;  
 cout << "please input a three-digit value"<<endl;  
 cin >> x;  
 modulus = x / 10;  
 left = x % 10;  
 y = modulus%10;  
 modulus = modulus / 10;  
 cout << "the reverse value of the input is " << left << y << modulus<<endl;  
 return 0;  
}

***11. Take an integer from the user and print the last digit of that number. For example, if the user enters 10773, the program prints 3.***

#include<iostream>  
using namespace std;  
int main() {  
 int x,q;  
 cout << "please input a value"<<endl;  
 cin >> x;  
 q=x%10;  
 cout << "the last digit of that number is " <<q<<endl;  
 return 0;  
}

***12. Write a program that takes a decimal number from the user and then prints the integer part and the decimal part separately. For example, if the user enters 2.718, the program prints: Integer part = 2 and decimal part = .718.***

#include<iostream>  
using namespace std;  
int main() {  
 float x,z;  
 int y;  
 cout<<"Enter the number "<<endl;  
 cin>>x;  
 y=x;  
 z=(x-y);  
 cout<<"The integer is "<<y<<endl;  
 cout<<"The decimal is "<<z<<endl;  
 return 0;  
}