//For now, unable to send actual files

**CODE 1:**

#include <stdio.h>

//Toni Hunter 187009925

//Program: Diamond-Printing Program

//This program prints a diamond shape with 15 stars in the middle

int main(void)

{

int row = 15;

int space = row + 1;

//top half

for (int i = 0; i <= row; i++) //keeps track of rows

{

for (int k = 0; k <= space - 1; k++){

printf(" ");

}

for (int j = 0; j <= i-1; j++){ //keeps track of stars

printf("\* "); //prints star and spaces between

}

printf("\n");

space--; //decrements space while going down

}

//bottom half

space += 1;

for (int i = row; i >= 0; i--) // i == row because bottom half starts from middle

{

for (int k = 0; k <= space; k++){

printf(" ");

}

for (int j = 0; j < i-1; j++){ //keeps track of stars

printf("\* ");

}

printf("\n");

space++; //increments space while going down

}

}

**CODE 2:**

#include <stdio.h>

//Toni Hunter 187009925

//Program: Calculating credit limits

//This program analyzes the credit status of three customers of a company by having user input their information

//and printing the new credit limit and stating overbalance

int main(void)

{

int AccNum;

double PrevCredLimt;

double CurrBal;

for (int cust = 1; cust <= 3; cust++)

{

printf("Enter Account number: ");

scanf("%d", &AccNum);

printf("Enter current credit limit: ");

scanf("%lf", &PrevCredLimt);

printf("Enter current balance: ");

scanf("%lf", &CurrBal);

double NewCredLim;

NewCredLim = ((PrevCredLimt \* 4)/5); //new credit limit

printf("New credit Limit: %0.2f\n", NewCredLim);

if (CurrBal > NewCredLim){

printf("%d: Your Current Balance Exceeds New Credit limit!\n", AccNum);

} //end if

printf("\n");

}

}

**CODE 3:**

#include <stdio.h>

//Toni Hunter 187009925

//Program:Calculating weekly pay

//This program calculates employee pay based on a code and information entered and finishes when the sentinel(-1) is entered.

int main(void)

{

int Code;

double Wage;

int Weeks;

int Hours;

int Items;

printf("Please Enter your code: ");

scanf("%d", &Code);

while (Code != -1){ // loops until user is finished

if (Code == 1){ // manager

printf("\nYou are a manager.");

printf("\nEnter your weekly salary: ");

scanf("%lf", &Wage);

printf("Enter weeks worked: ");

scanf("%d", &Weeks);

printf("Your earnings are $%0.2f\n", Wage \* Weeks);

}

else if (Code == 2){ //Hourly Worker

printf("\nYou are a Hourly Worker.");

printf("\nEnter amount of hourly pay: ");

scanf("%lf", &Wage);

printf("Enter hours worked: ");

scanf("%d", &Hours);

if (Hours > 40){

int XHours = Hours - 40; // Gets extra Hours

int Time = Wage \* 40;

double Half = ((Wage \* 1.5) \* XHours);

double WPlus = Time + Half;

printf("You worked 40+ hours. Your earnings are $%0.2f\n", WPlus);

}

else { //to exit if

printf("Your Earnings are $%0.2f\n", Wage\*Hours);

}

}

else if (Code == 3){ // Commission worker

printf("\nYou are a Commission Worker.");

printf("\nEnter weeks worked: ");

scanf("%d", &Weeks);

printf("Enter amount made in sales: ");

scanf("%lf", &Wage);

int Base = Weeks\*350;

double Commi = Wage\*.065;

double BaCo = Base + Commi;

printf("Your commission and earnings are $%0.2f\n", BaCo);

}

else if (Code == 4){ // Piece maker

printf("\nYou are a Piece Maker.");

printf("\nEnter number of items produced: ");

scanf("%d", &Items);

printf("Enter Wage per item: ");

scanf("%lf", &Wage);

printf("Your earnings are $%0.2f\n", Wage\*Items);

}

printf("\nPlease Enter your code: ");

scanf("%d", &Code);

}

}

**CODE 4:**

#include <stdio.h>

//Toni Hunter 187009925

//Program: Pythagorean Triples

// This program uses "brute force" to compute all Pythagorean triples up to 500 without repeating equations

int main(void)

{

int counter;

for (int a=1; a<=500; a++) // a values

{

for (int b=1; b<=500; b++){ //b values

for (int c=1; c<=500; c++){ //c values

if ( a<b && a\*a + b\*c == c\*c){ // checks if Pythagorean triple

printf("(%d^2 + %d^2 = %d^2) ", a,b,c);

printf("\n");

counter++; // keeps track of triples

}

}

}

}

}