

```

#define _CRT_SECURE_NO_WARNINGS
#include <stdio.h>
#define _BIG_TEACHER_DISCOUNT 0.12
#define _TEACHER_DISCOUNT 0.10
#define _SALES_TAX 0.05
#define NUMBER_TO_ROUND 0.005

/*
Title: Sheet Music Teacher Discount
Author: Adolfo Gante
Date: 02/27/2020
Description: Keith's Sheet Music needs a program to implement its music
teacher's discount policy.
Give each customer a printed receipt, Music teachers receive a 10%
discount or 12% if purchase greater than 100.
The discount calculation occurs before addition of the 5% sales tax.
*/

double printReceipt(total_spent, discounted_total, total,
teacher_student);
void bigLine(void);
double rounding(total);

int main(void)
{
    //variable declarations

    double total_spent = 0;
    double discounted_total = 0;
    double total = 0;
    int teacher_student = 0;

    //asking for how much they spent and if they are a teacher or
student
    printf("Enter total purchase amount:\n");
    scanf("%lf", &total_spent);
    printf("Are a teacher or student? Input 1 or 0 ,respectively.\n");
    scanf("%d", &teacher_student);

    //determenting wether or not the customer can receive a discount
    //if they can receive a discount which one %10 or %12
    if (teacher_student == 1)
    {
        if (total_spent >= 100)
        {
            discounted_total = total_spent - total_spent
* _BIG_TEACHER_DISCOUNT; //calculating the total after %12 discount is
applied
            total = discounted_total + discounted_total *
_SALES_TAX; //calculating final total after sales tax %5
        }
        else
        {

```

```

        discounted_total = total_spent - total_spent
* _TEACHER_DISCOUNT; //calculating the total after %10 discount is applied
        total = discounted_total + discounted_total *
_SALES_TAX; //calculating final total after sales tax %5
    }
}
else
{
    total = total_spent + total_spent * _SALES_TAX;
//calculating final total after sales tax %5
}

    printReceipt(total_spent, discounted_total, total, teacher_student);
//function to print a neat and clean "receipt" of the purchase

    return (0);
}

//function to print a neat and clean "receipt" of the purchase
//the functoion determine if the customer is a student or teacher
//prints the appropriate receipt after determenation

double printReceipt(double total_spent, double discounted_total, double
total, int teacher_student)
{
    //these two calculate how much money the customer saved with the
discounts
    double discount1 = total_spent * _BIG_TEACHER_DISCOUNT;
    double discount2 = total_spent * _TEACHER_DISCOUNT;

    //these if statements print the appropriate receipte
    if (teacher_student == 1)
    {
        if (total_spent >= 100)
        {
            bigLine();
            printf("Teachers Receipt\n");
            printf("Total Purchase:                %lf\n",
total_spent);
            printf("Teacher's Discount(12%%):        %lf\n",
rounding(discount1));
            printf("Discounted Total:                %lf\n",
rounding(discounted_total));
            printf("Sale's Tax:                    %lf\n",
rounding(discounted_total * _SALES_TAX)); //prints & calculates the amount
of sales tax charged
            printf("Total:                            %lf\n",
rounding(total));
            bigLine();
        }
        else
        {
            bigLine();
            printf("Teachers Receipt\n");

```

```

        printf("Total Purchase:                %lf\n",
total_spent);
        printf("Teacher's Discount(10%%):      %lf\n",
rounding(discount2));
        printf("Discounted Total:              %lf\n",
rounding(discounted_total));
        printf("Sale's Tax:                    %lf\n",
rounding(discounted_total * _SALES_TAX)); //prints & calculates the amount
of sales tax charged
        printf("Total:                        %lf\n",
rounding(total));
        bigLine();
    }
    else
    {
        bigLine();
        printf("Customer's Receipt\n");
        printf("Total Purchase:                %lf\n", total_spent);
        printf("Sale's Tax:                    %lf\n",
rounding(total_spent * _SALES_TAX)); //prints & calculates the amount of
sales tax charged
        printf("Total:                        %lf\n", rounding(total));
        bigLine();
    }

    return(0);
}

//it prints a loooooooooooooooooooooong line
void bigLine(void)
{
    printf("-----\n");
}

//this function rounds the outputs because we're dealing with money which
must only have two decimal places
double rounding(double total)
{
    //variables
    double round1 = 0;
    int round2 = 0.0;
    double round3 = 0.0;

    //calculations

    round1 = total + NUMBER_TO_ROUND;
    round2 = round1 * 100;
    round3 = round2 / (double)100;

    return(round3);
}

```