JEWELRY WORKSHOP

Submitted by: MARYAM ALRUBYAYE

JEWELRY WORKSHOP

{Jewelry management system}

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Thank You

To Assoc.prof. (Ph.D.) TANER ÇEVİK

A teacher is a guide and a compass. You've shown me the path to success and walked with me along the way. Your high expectations in the lectures have helped give me confidence in myself. Thanks so much for all you've done.

I would also like to thank Research Assist. Mr. ÇAĞDAŞ ÖZER for giving us all the support needed and help to complete this project.

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ABSTRACT

Jewelry management system is a project which aims in provide all the needs of the jewelry workshop in terms of financial accounts and converts the values of both gold and silver into dollars.

This program will be abbreviated for the user to use the papers and pens to perform the infinite calculation also calculating the gram differences for both gold and silver before and after formulation and manufacture.

This program aims to make the working in the jewelry workshop more enjoyable with less effort, as well as decreasing the error percentage by 99%.

CHAPTER 1

INTRODUCTION

This chapter gives an overview about the aim, and objectives.

1.1 PROJECT AIMS AND OBJECTIVES

- It has two systems one is for gold management and the other is for silver management.
- Has ingot analysis and extraction of metal values.
- Contain everyday table which saves all the out-quantity and the in-quantity differences that happened as a result of manufacturing process.
- Changes from grams to dollars for both gold and silver systems.
- In gold system the user can chose between all the calibers and know the specific price for each one.
- Contains all the manufacturing wages for both gold and silver systems.
- Contains all the available types of jewelry for both ganders that is manufactured inside the workshop.
- The user can choose between saving the information and keep it for any period of time he wants or just start from the beginning.
- The user can calculate the total difference and know what is left from the total quantity in the box in both systems.

CHAPTER 2

SYSTEM ANALYSIS

2.1 Software and hardware requirements

This section describes the software and hardware requirements of the system to run the program in the most efficint way.

- SOFTWARE REQUIREMENTS

• Operating system- Windows 10 is used as the operating system as it is stable and supports more features and is more user friendly

• Development tools and Programming language- C is used to write the whole code.

- HARDWARE REQUIREMENTS

- Intel core i7 7th generation is used as a processor because it is reliable, stable and faster than other processors and we can run our pc for longtime. By using this processor we can keep on developing our project without any worries.
- Ram 8 gb is used as it will provide super fast reading and writing capabilities and it will serve gratly in processing.

2.2 Programming tools used:

I used C LANGUAGE to write the whole code,

THE C PROGRAMMING LANGUAGE WAS pioneered by Dennis Ritchie at AT&T Bell Laboratories in the early 1970s. It was not until the late 1970s, however, that this programming language began to gain widespread popularity and support. This was because until that time C compilers were not readily available for commercial use outside of Bell Laboratories. Initially, C's growth in popularity was also spurred on in part by the equal, if not faster, growth in popularity of the Unix operating system. This operating system, which was also developed at Bell Laboratories, had C as its "standard" programming language. In fact, well over 90% of the operating system itself was written in the C language!

The enormous success of the IBM PC and its look-alikes soon made MS-DOS the most popular environment for the C language. As C grew in popularity across different operating systems, more and more vendors hopped on the bandwagon and started marketing their own C compilers. For the most part, their version of the C language was based on an appendix found in the first C programming text—The C Programming Language—by Brian Kernighan and Dennis Ritchie. Unfortunately, this appendix did not provide a complete and unambiguous definition of C, meaning that vendors were left to interpret some aspects of the language on their own.

In the early 1980s, a need was seen to standardize the definition of the C language. The American National

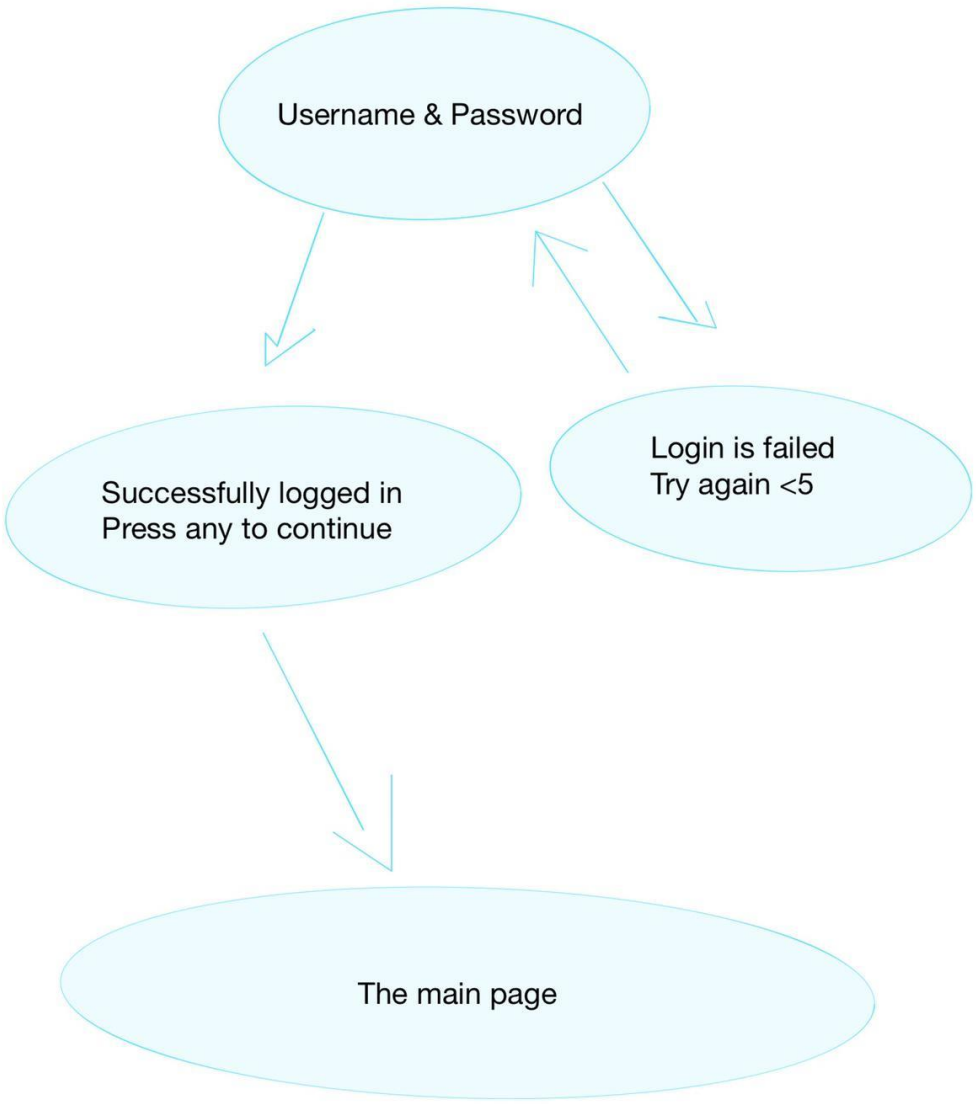
Standards Institute (ANSI) is the organization that handles such things, so in 1983 an ANSI C committee (called X3J11) was formed to standardize C. In 1989, the committee's work was ratified, and in 1990, the first official ANSI standard definition of C was published.

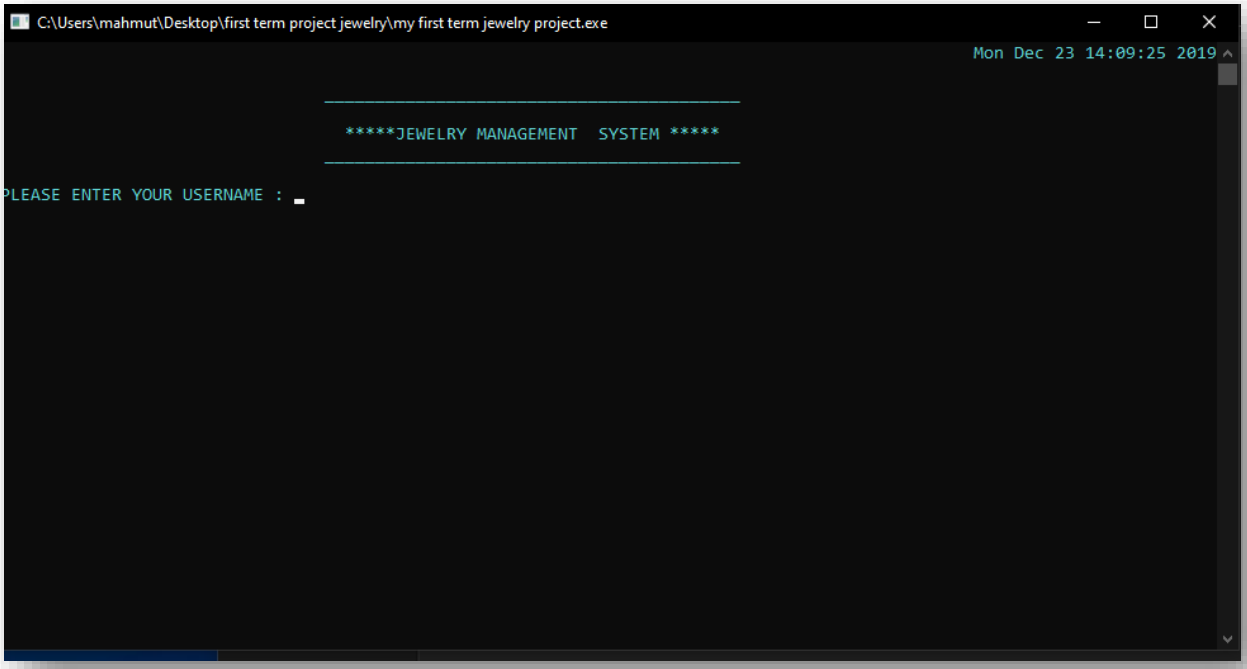
Because C is used around the world, the International Standard Organization (ISO) soon got involved. They adopted the standard, where it was called ISO/IEC 9899:1990. Since that time, additional changes have been made to the C language. The most recent standard was adopted in 1999. It is known as ANSI C99, or ISO/IEC 9899:1999. It is this version of the language upon which this book is based.

C is a "higher-level language," yet it provides capabilities that enable the user to "get in close" with the hardware and deal with the computer on a much lower level this is a because, although C is a general-purpose structured programming language, it was originally designed with systems programming applications in mind and, as such, provides the user with an enormous amount of power and flexibility.

CHAPTER 3
PROGRAM EXPLAINATION

3.1 login system:

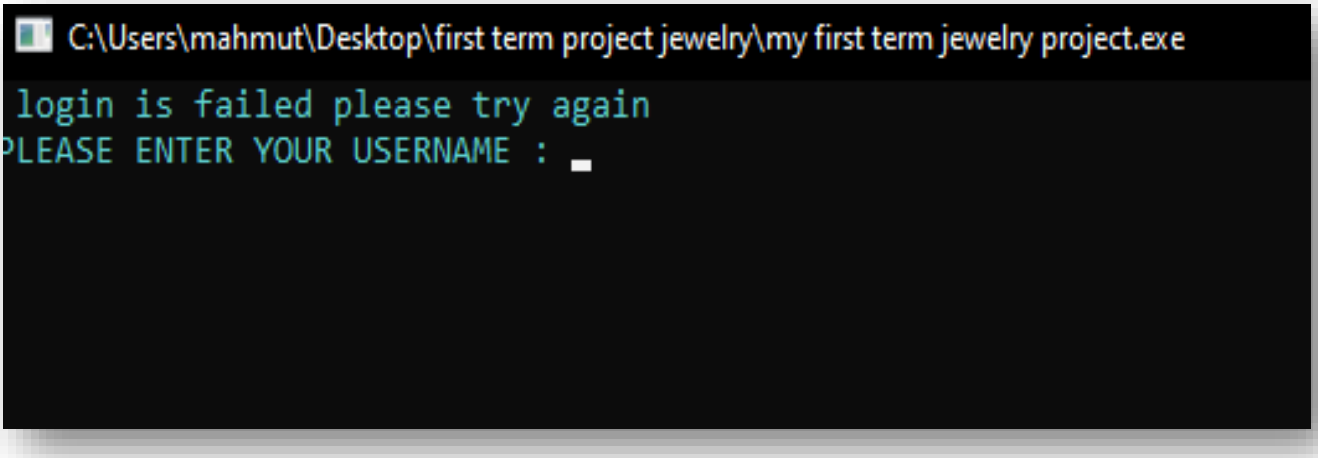




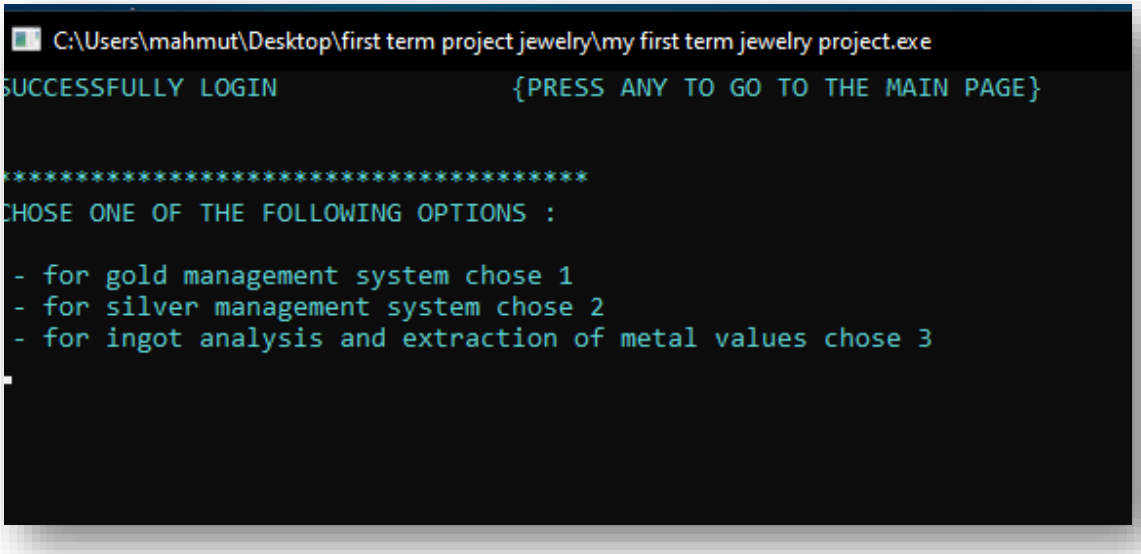
This is the first page that shows up when the user opens the program and the user can not enter to the programs till he enters the company username and password successfully.

If the user enters wrong username or wrong password he can not enter to the program. The user has only 5 Chances to try again after that the program will be closed.

The program has a time table that shows the specific time and date for the day.

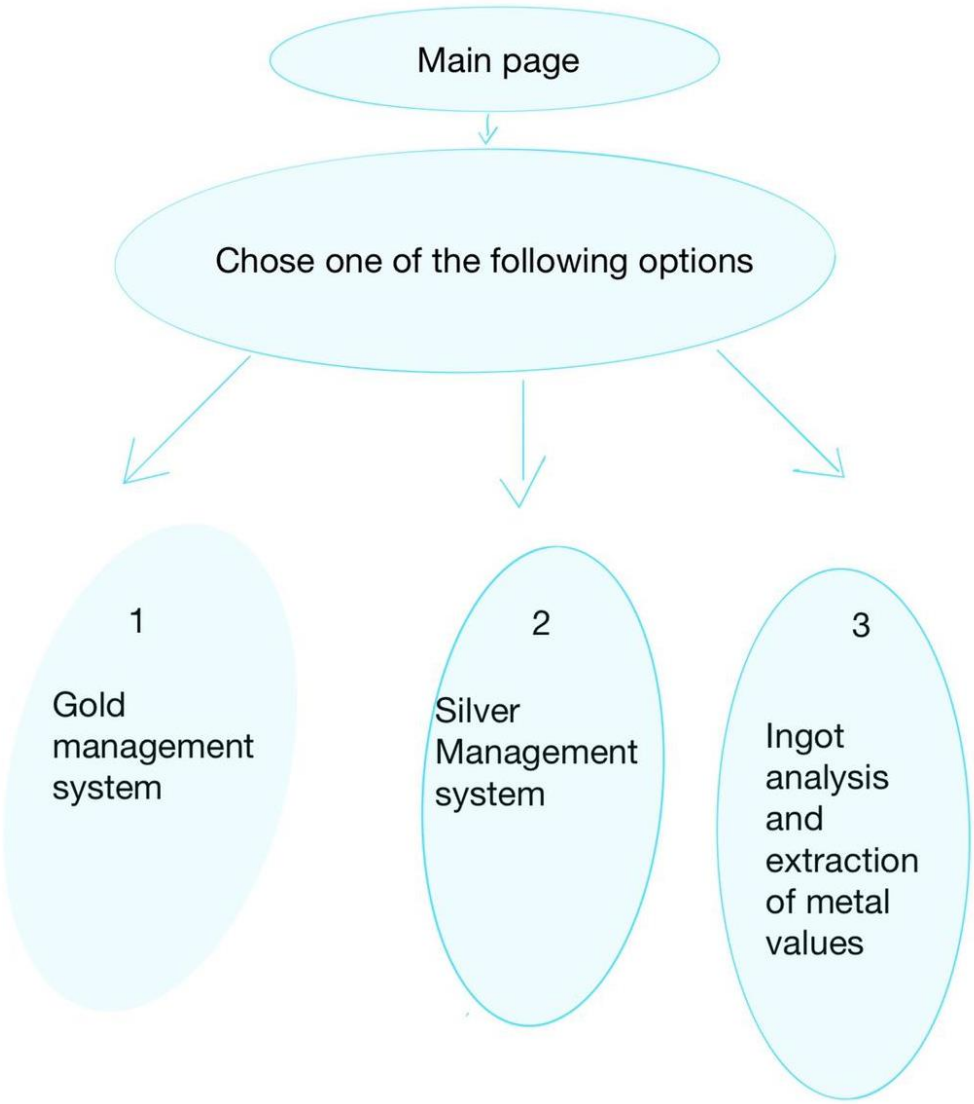


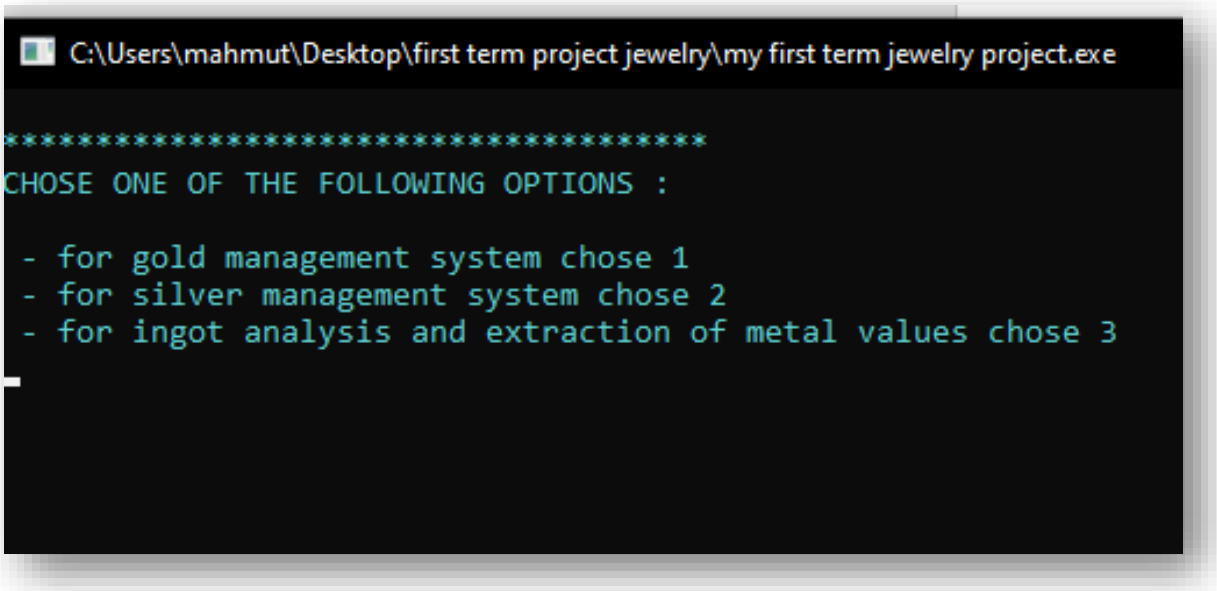
- This page shows up when the user enters wrong username or password.



- this is the page that shows up after login successflly.

3.2 The main page:

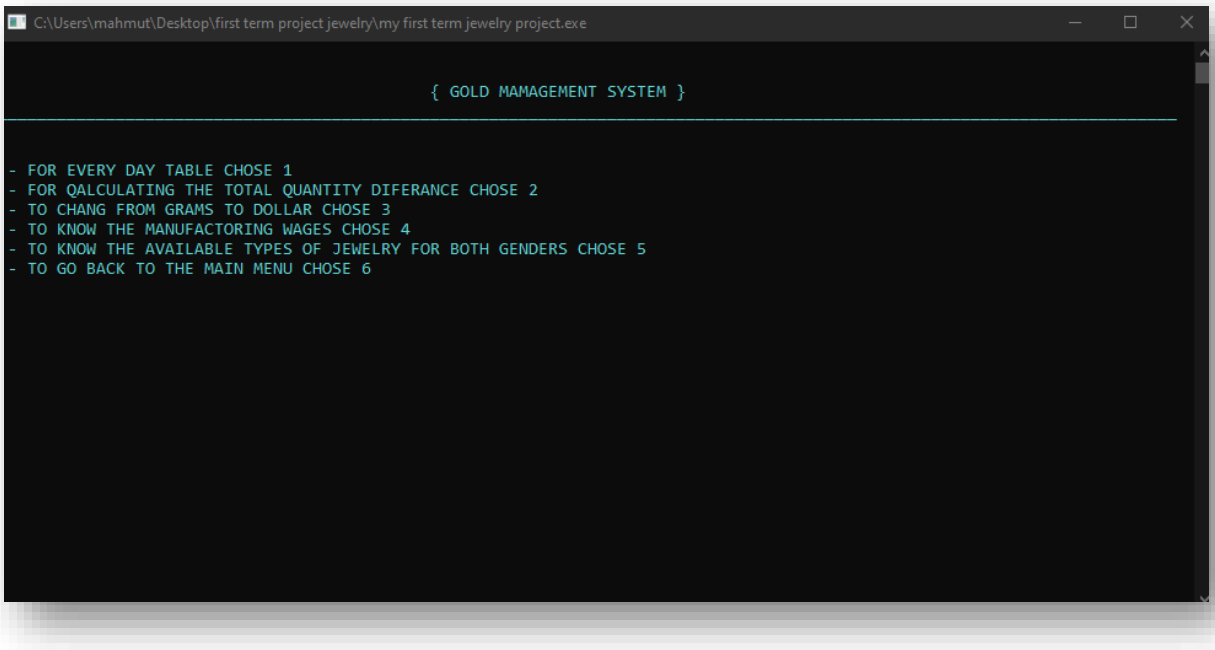




In the main page the user can chose between three options:

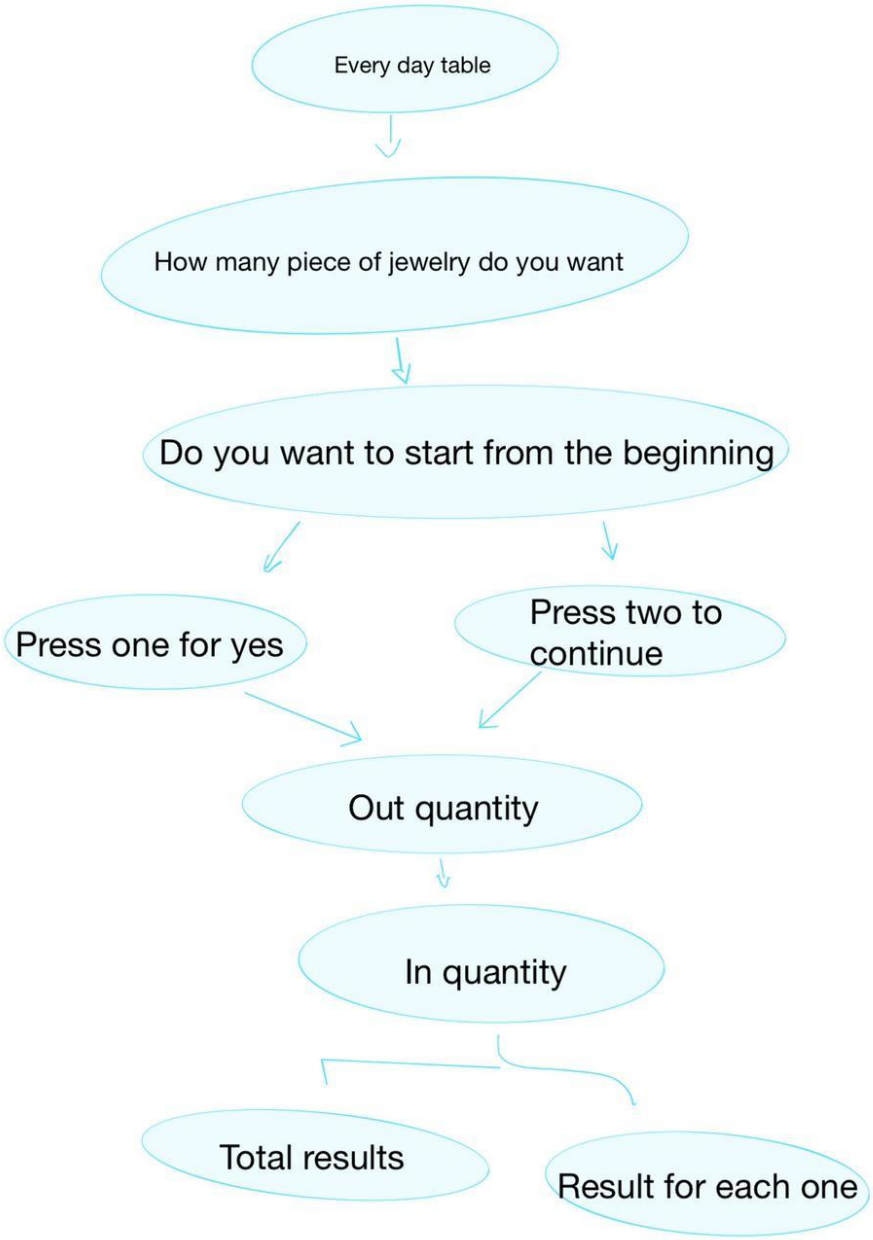
- The first option contains the gold management system.
- The second option contains the silver management system.
- The third option analysis the ingot and gives the extraction metals values.

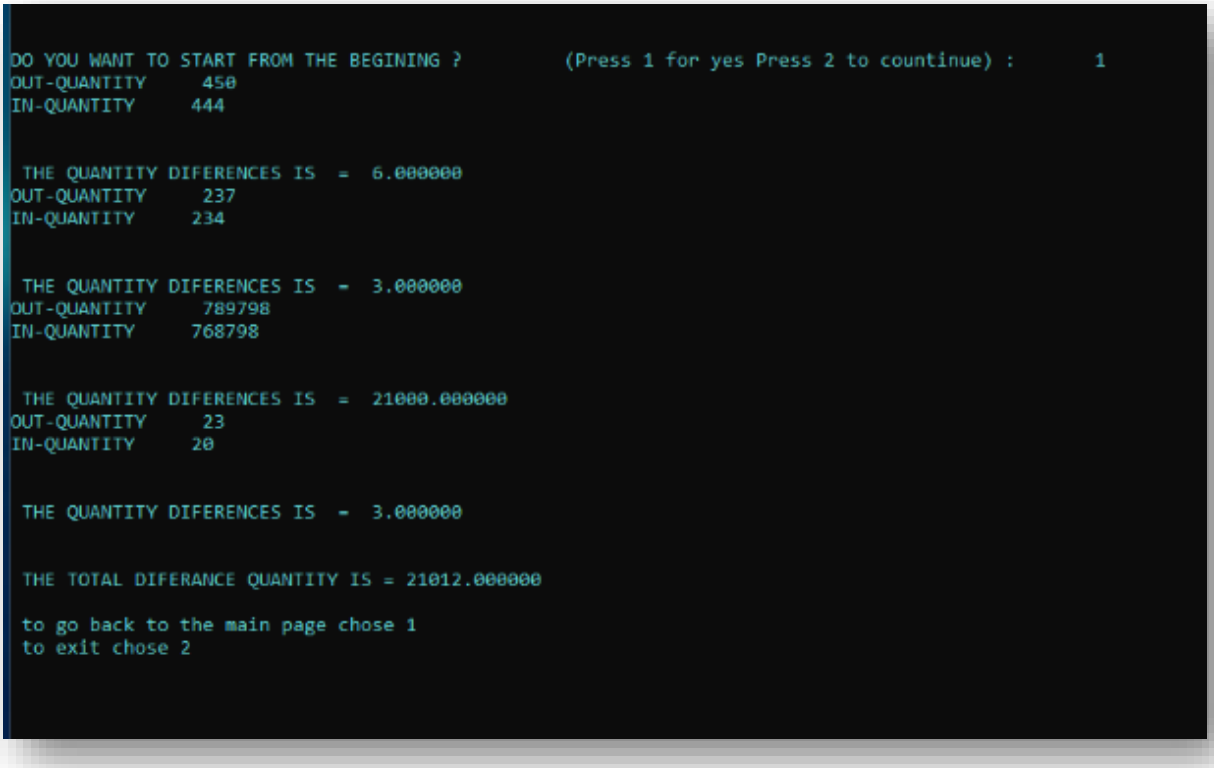
3.3 Gold management system:



In the gold management system the user has 6 options to chose between them:

1- Everyday table





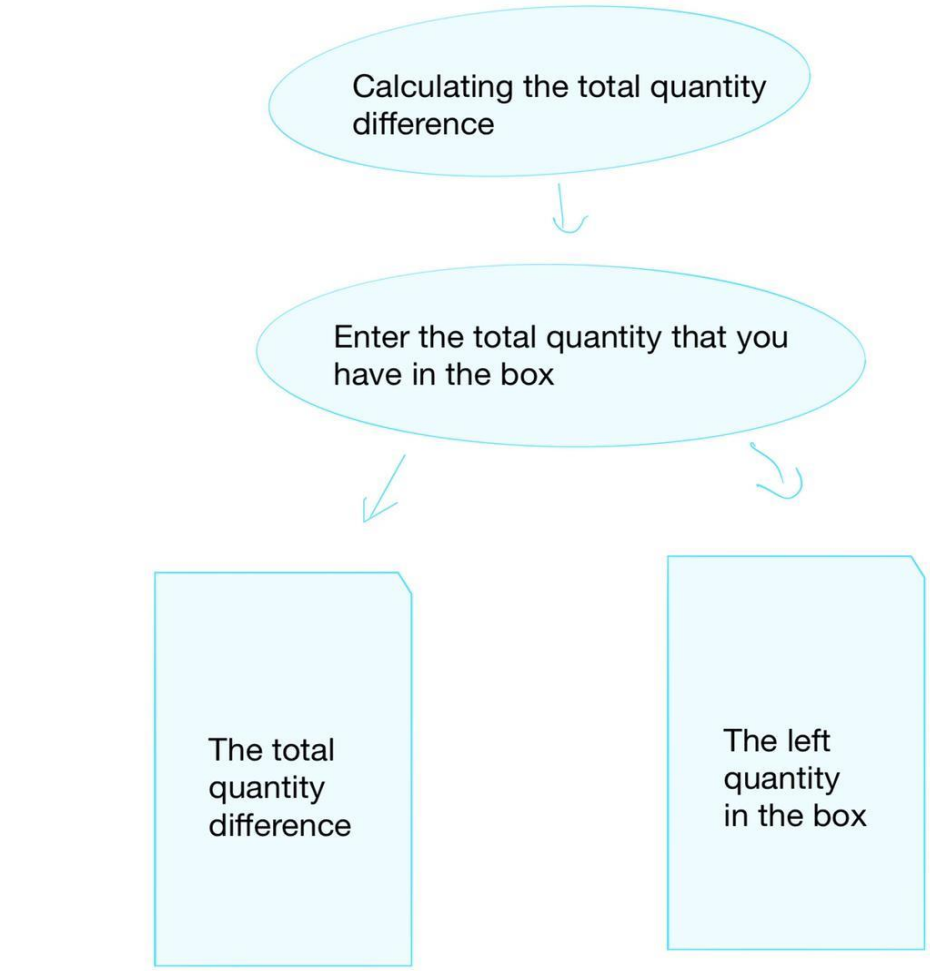
In everyday table the user will have to choose

- How many piece he wants to enter at that time.
- The user has to choose if he needs to start from the beginning and delete all the stored data from the file or proceed and add new data while keeping the current data in the file.
- The user will enter the out-quantity in grams and the in-quantity also in grams. After that the program will calculate the quantity differences by subtracting the two values and gives the result then calculate all the result for every single piece and gives their total result.

- Out-quantity -> this refers to the amount of gold in grams that's came out from the box which contains all the gold in the company and keep it safe.

- In-quantity -> this refers to the amount of gold in grams that will be add back to the box after the manufacturing process, (there is always a weight loss after the manufacturing process is finished).
- The gold loss is measured by knowing the amount of gold particles lost throughout the process of gold pieces remodeling, this is done by collecting those particle from the device responsible for the remodeling and cleaning them from any residues by crimination process. Then the quantity of those particles is subtracted from the original value.
- The sum of the difference will be stored in a file that the user can retrieve to know the total loss from the total value in the box.

2- Calculate the total quantity difference:

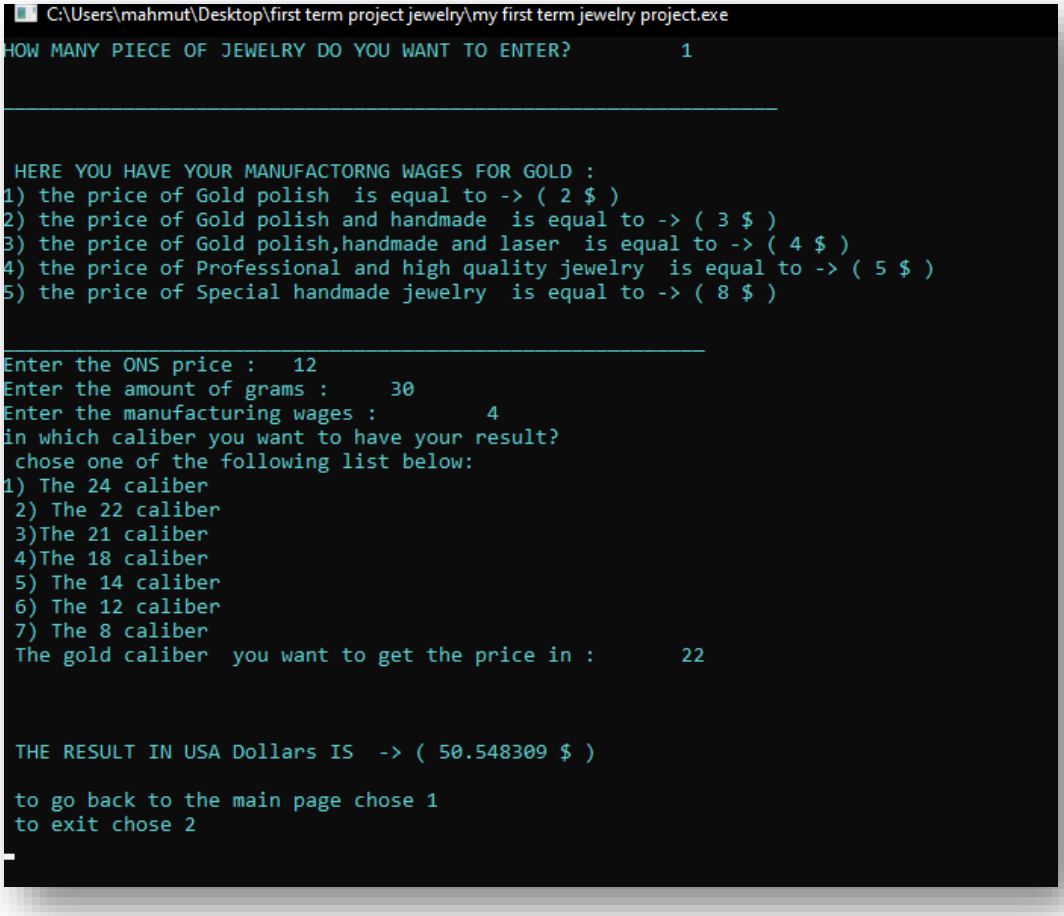



```
ENTER THE TOTAL QUANTITY OF THAT YOU HAVE IN THE BOX : 7007384
the total Quantity diference is :  21012.000000
the left quantity in the box is : 6986372.000000

 to go back to the main page chose 1
 to exit chose 2
```

Here the user could know the total loss from the total quantity for a specific period of time.

3- Change from grams to dollars



- Here the user can know the gram price for all gold caliber.
- In this program the gold caliber that is available
  {24, 22, 21, 18, 14, 12, 8}
- To calculate the price of gold the program will do this calculation which is different from caliber to another ->
  - In the 24 caliber the program will do this calculations : the program will take the ONS price for the day which will be taking from the user and divides it by 31.1 (has price) then the program will multiply the result by both the grams amount and the wages which will be also taken from the user.

- In the 22 caliber the program will do the fallowing calculations : first it will take the ONS price for the day ,which will be taking from the user, and divides it by 31.1 (the HAS price). Then the program will multiply the result by the grams amount and the result of this will be divided by 0.916. As a final step the result of the previous calculations will be multiplied by the wages to get the total price in dollars.

- In the 21 caliber the program will do the same exact caculations but instead of dividing by 0.916 it will be devide by 0.875.

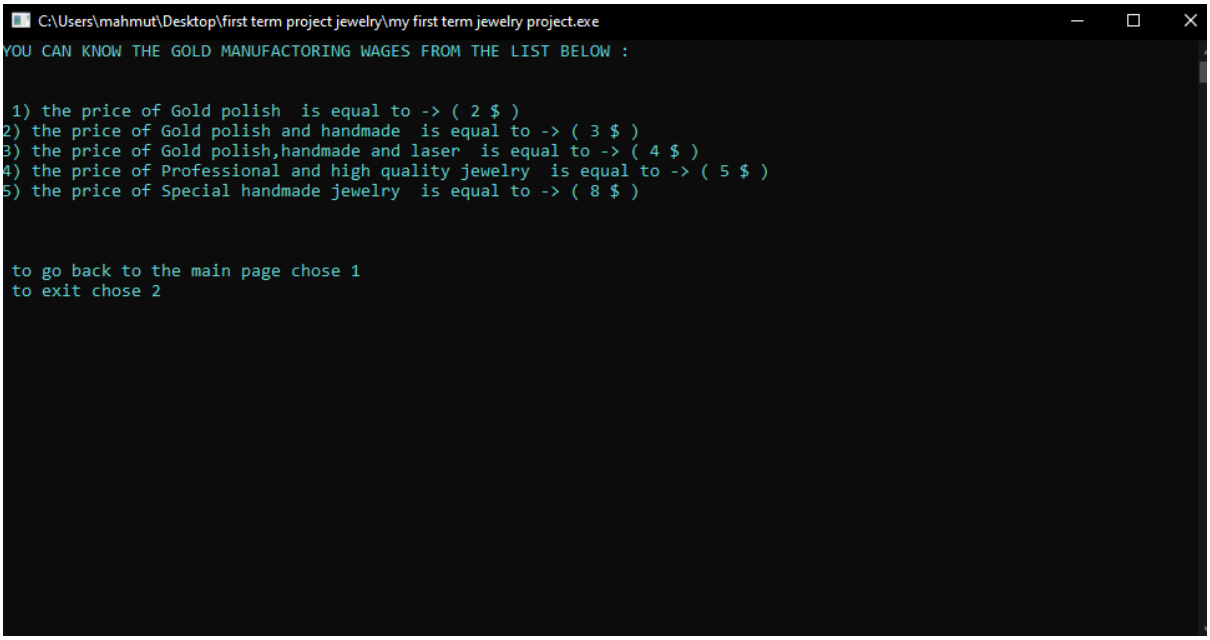
- In the 18 caliber the program will do the same exact calculations but instead of dividing by 0.916 it will be devide by 0.750.

- In the 14 caliber the program will do the same exact calculations but instead of dividing by 0.916 it will be devide by 0.585.

- In the 12 caliber the program will do the same exact calculations but instead of dividing by 0.916 it will be divide by 0.500.

- In the 8 caliber the program will do the same exact calculations but instead of dividing by 0.916 it will be divide by 0.335.

4- GOLD MANUFACTURING WAGES



- When the user pic this choice. This list will show up which has the manufacturing wages to helps the user in knowing the pricing of the grams of each piece in dollars and the way it was manufactured.

The list for the gold manufacturing wages is:

1) The price of Gold polish is equal to -> (2 $)

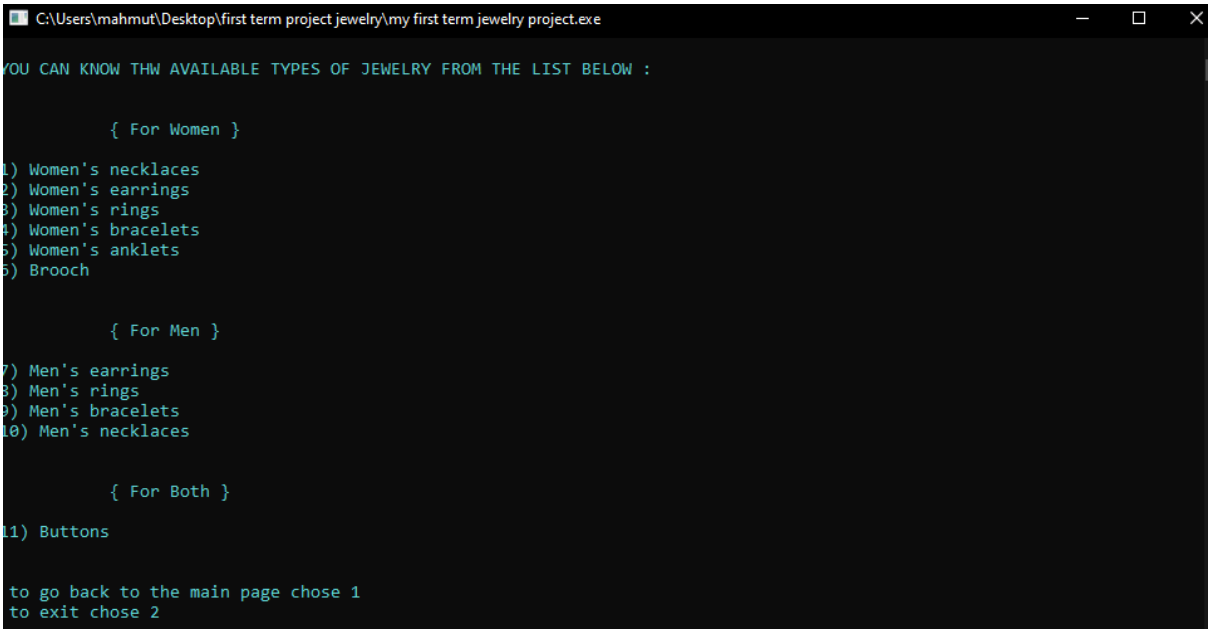
2) The price of Gold polish and handmade is equal to -> (3 $)

3) the price of Gold polish, handmade and laser is equal to -> (4 $)

4) The price of Professional and high quality jewelry is equal to -> (5 $)

5) The price of Special handmade jewelry is equal to -> (8 $)

5- JEWELRY TYPES



- When the user pic this choice. A list will show up showing all types of jewelry that the workshop provides.

The list of the available jewelry types is:

1) Women's necklaces

2) Women's earrings

3) Women's rings

4) Women's bracelets

5) Women's anklets

6) Brooch

7) Men's earrings

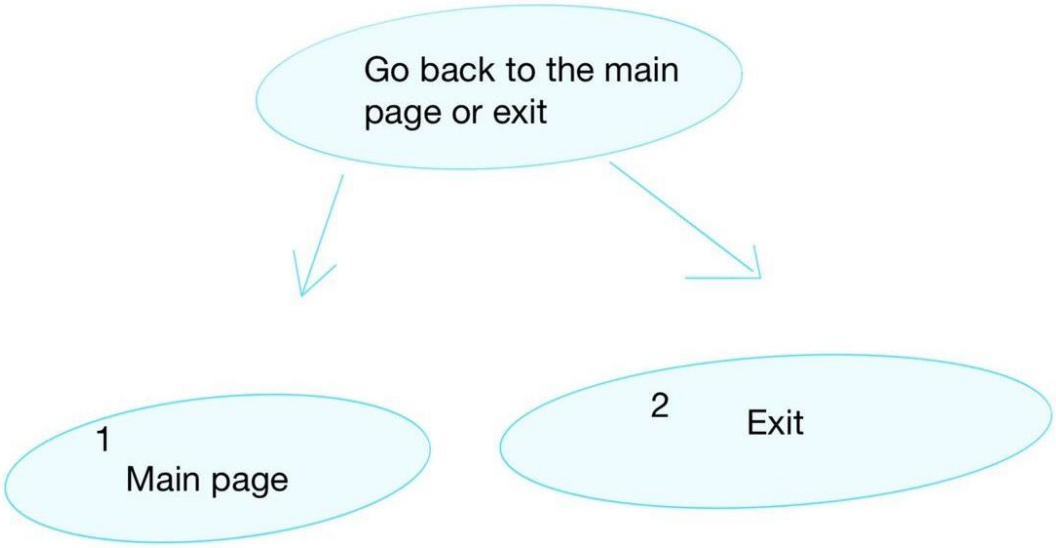
8) Men's rings

9) Men's bracelets

10) Men's necklaces

11) Buttons

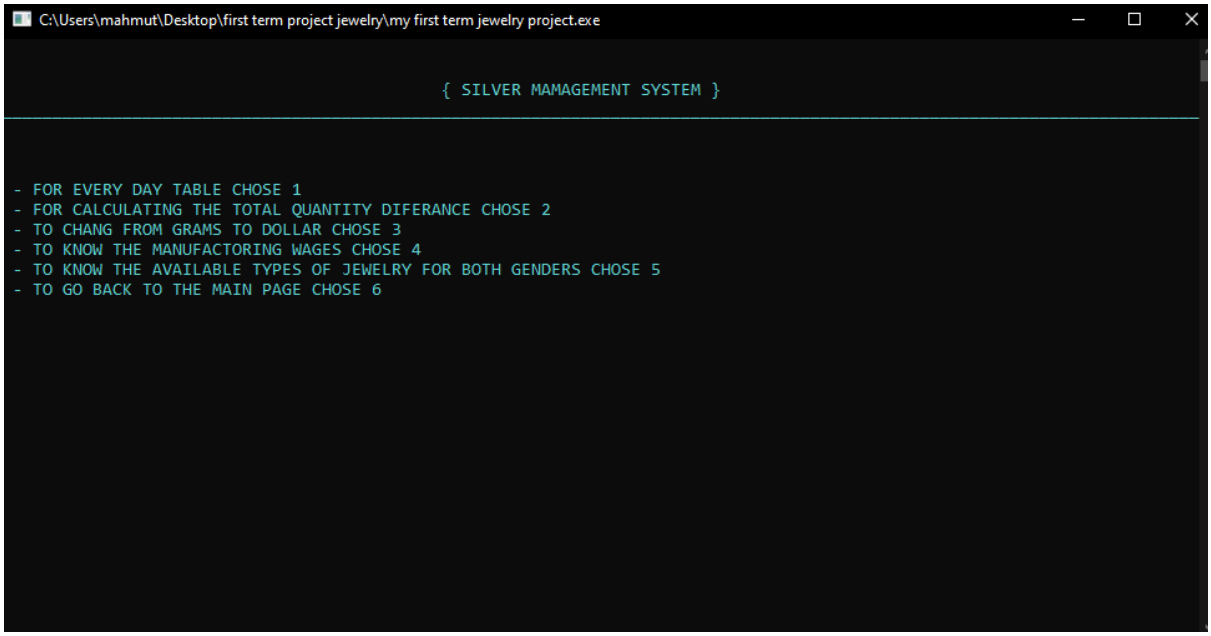
6- GOING BACK TO THE MAIN PAGE AND EXITING




```
to go back to the main page chose 1
to exit chose 2
```

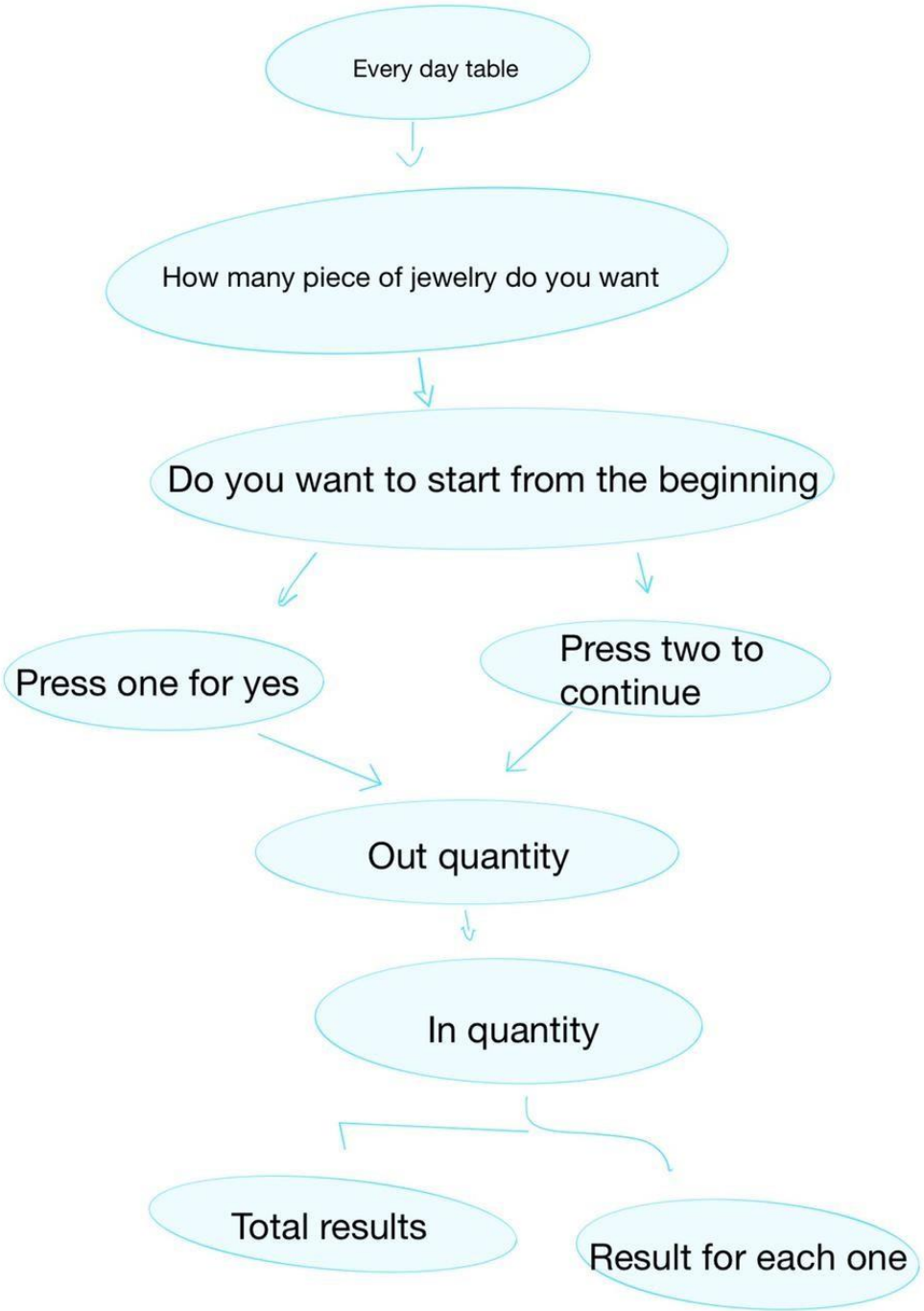
- This option is present in the first page of silver and gold systems. Also it will show up at the end of each function automatically. This option gives the user the ability to go back to the main page or exiting.

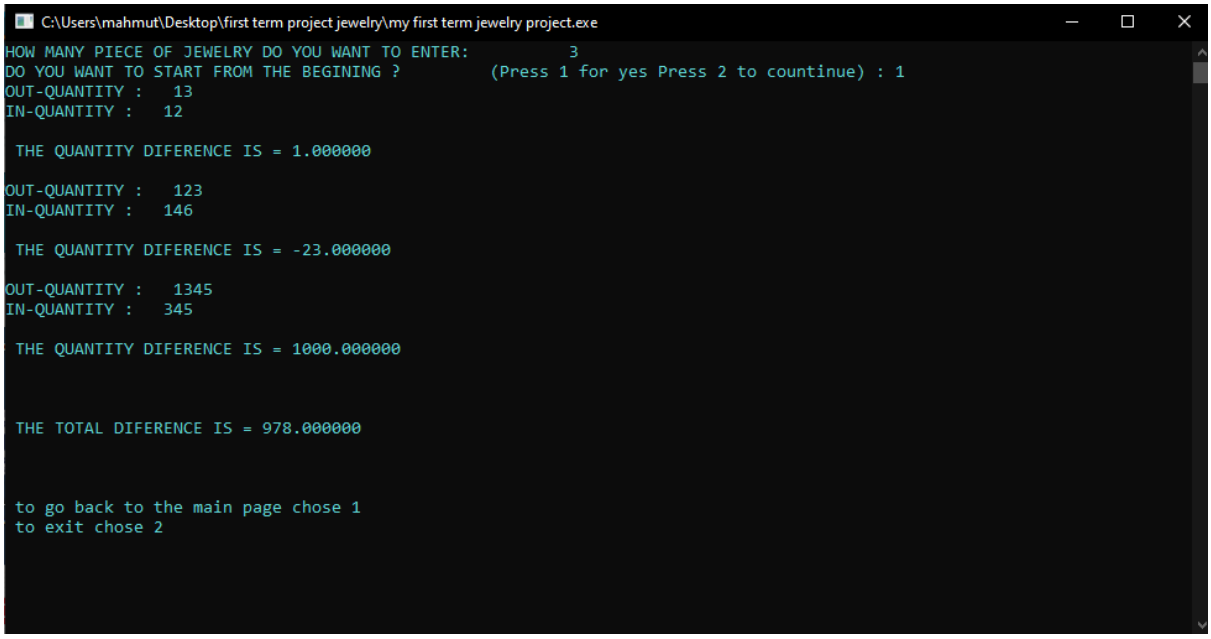
3.4 Silver management system



- In the silver management the user has six option to choose from:

1- FOR EVERYDAY TABLE CHOOSE





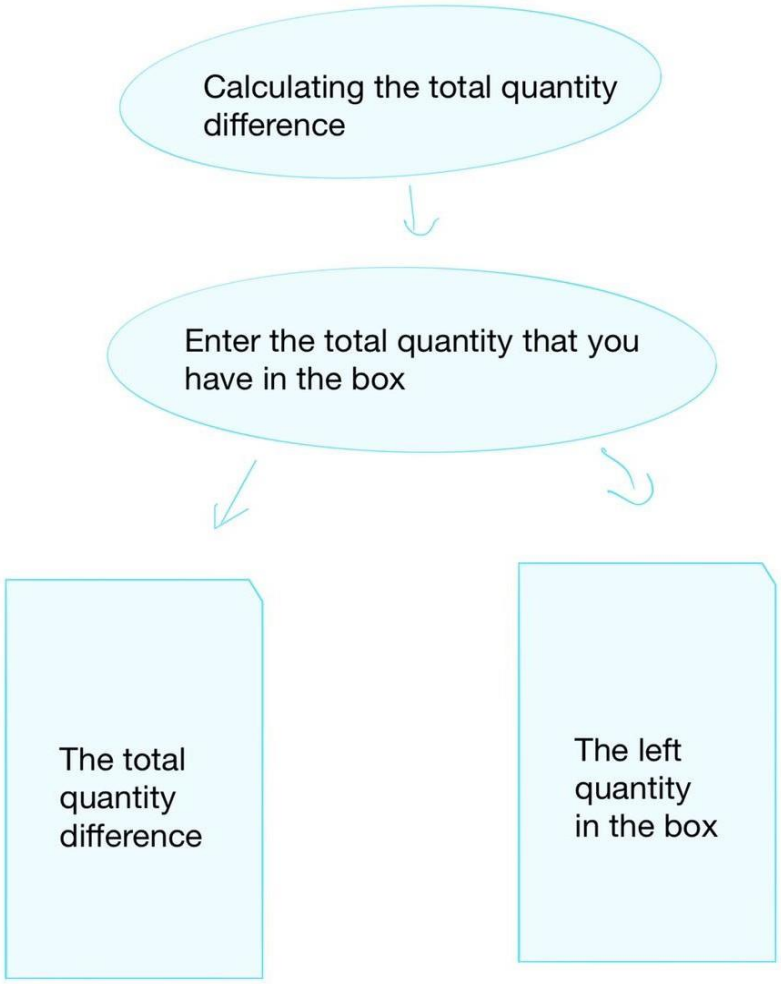
In everyday table the user will have to choose

- How many piece he wants to enter at that time.
- The user has to choose if he needs to start from the beginning and delete all the stored data from the file or proceed and add new data while keeping the current data in the file.
- The user will enter the out-quantity in grams and the in-quantity also in grams. After that the program will calculate the quantity differences by subtracting the two values and gives the result then calculate all the result for every single piece and gives their total result.

- Out-quantity -> this refers to the amount of gold in grams that’s came out from the box which contains all the gold in the company and keep it safe.

- In-quantity -> this refers to the amount of gold in grams that will be add back to the box after the manufacturing process, (there is always a weight loss after the manufacturing process is finished).
- The gold loss is measured by knowing the amount of gold particles lost throughout the process of gold pieces remodeling, this is done by collecting those particle from the device responsible for the remodeling and cleaning them from any residues by crimination process. Then the quantity of those particles is subtracted from the original value.
- The sum of the difference will be stored in a file that the user can retrieve to know the total loss from the total value in the box.

2- CALCULATING THE TOTAL QUANTITY DIFFERENCES

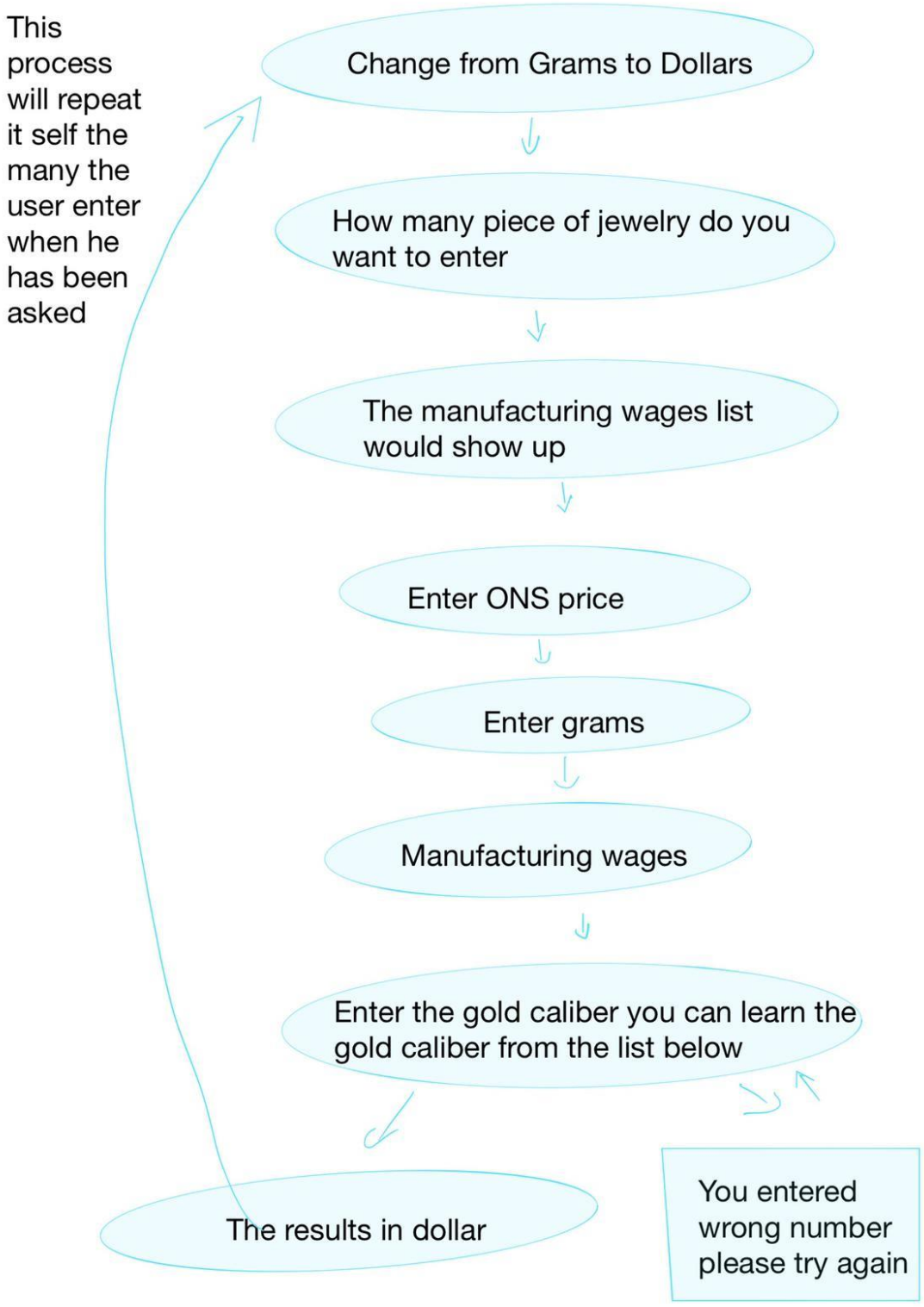


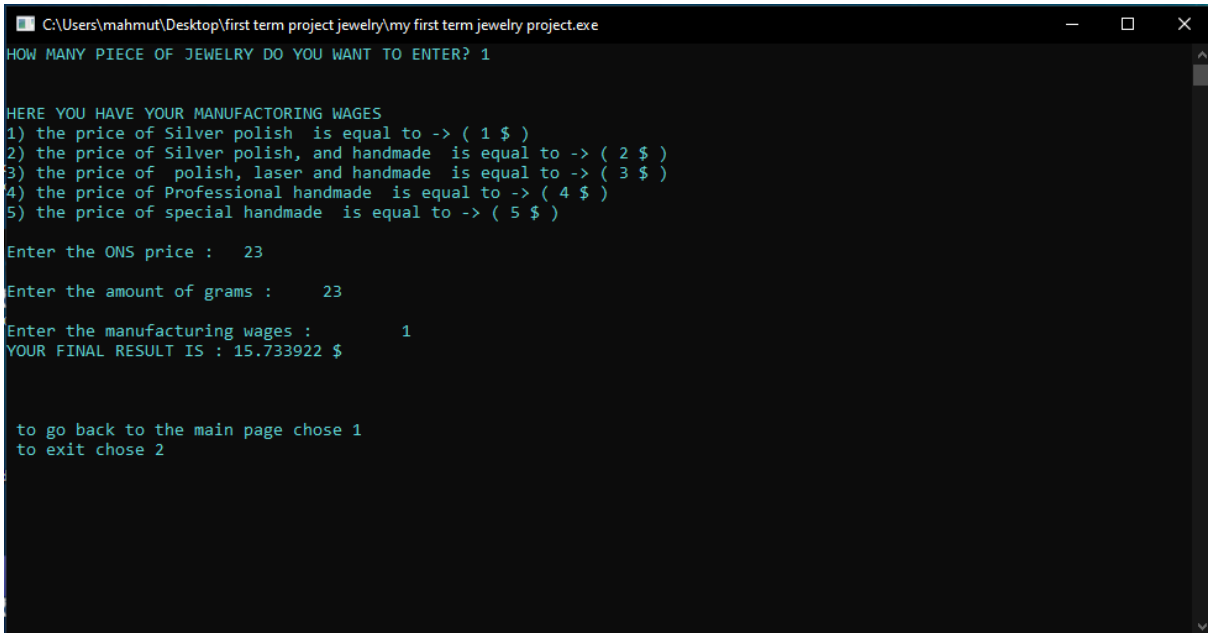

```
C:\Users\mahmut\Desktop\first term project jewelry\my first term jewelry project.exe
ENTER THE TOTAL QUANTITY OF THAT YOU HAVE IN THE BOX : 500
the total Quantity diference is :  116.000000
the left quantity in the box is : 384.000000


 to go back to the main page chose 1
 to exit chose 2
```

- Here the user can know the total loss from the total quantity for a specific period of time.

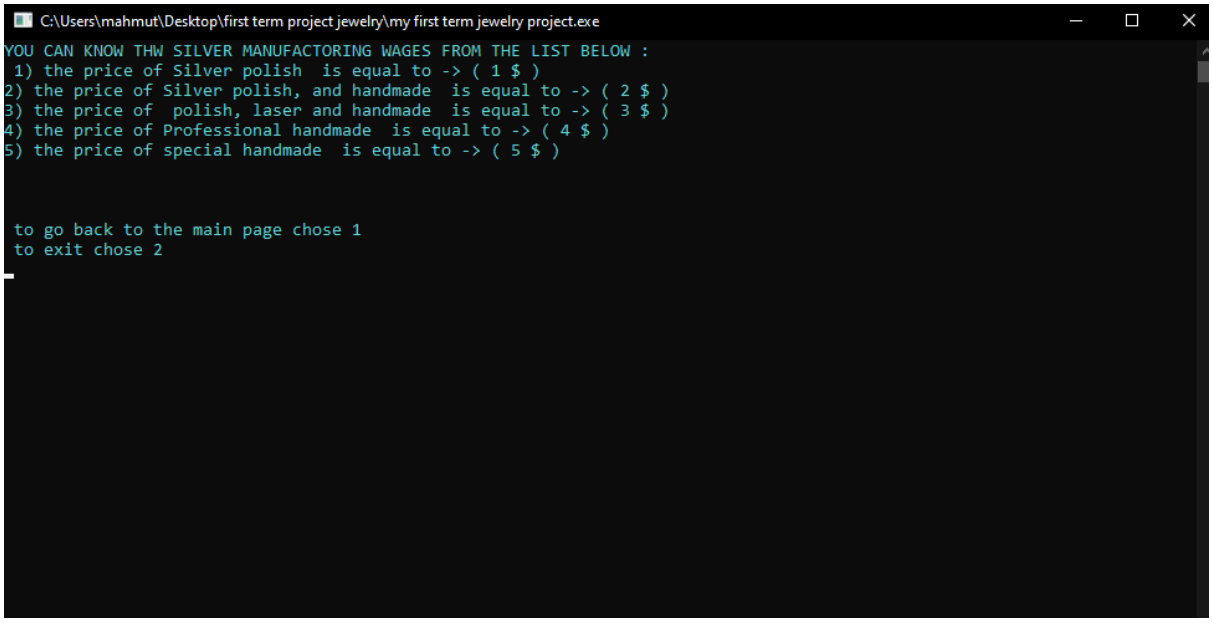
3- CHANGE FROM GRAM TO DOLLAR





- To calculate the price of silver in dollars the program will do these calculations: first it will take the ONS price for the day, which will be entered by the user, and divides it by 31.1 (The HAS price). The result of this will be then multiplied by 0.925 and its' result will be multiplied by the total grams the wages to get the price.

4- SILVER MANUFACTURING WAGES



- When the user pic this choice. This list will show up which has the manufacturing wages to helps the user in knowing the pricing of the grams of each piece in dollars and the way it was manufactured.

The silver manufacturing wages:

1) The price of Silver polish is equal to -> (1 $)

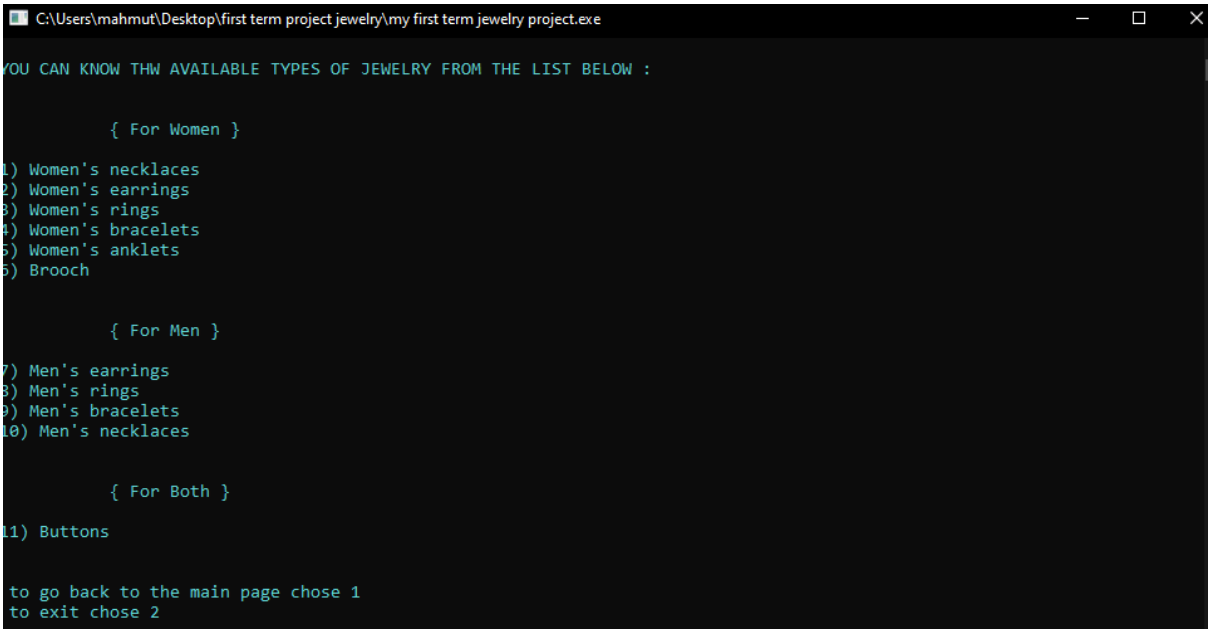
2) The price of silver polish and handmade is equal to -> (2 $)

3) The price of polish, laser and handmade is equal to -> (3$)

4) The price of Professional handmade is equal to -> (4 $)

5) The price of special handmade is equal to -> (5 $)

5- JEWELRY TYPES



- When the user pic this choice. A list will show up showing all types of jewelry that the workshop provides.

The list of the available jewelry types is:

1) Women's necklaces

2) Women's earrings

3) Women's rings

4) Women's bracelets

5) Women's anklets

6) Brooch

7) Men's earrings

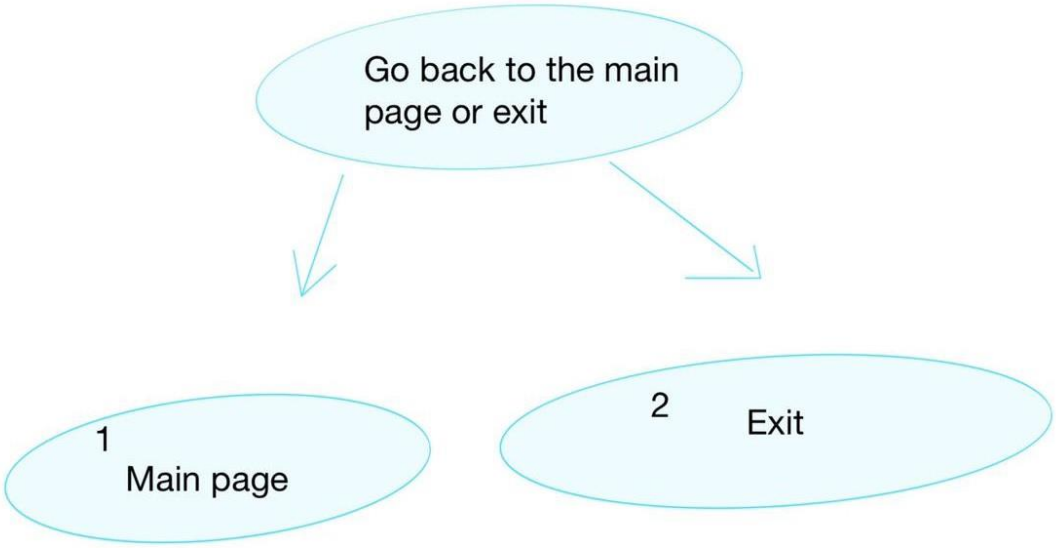
8) Men's rings

9) Men's bracelets

10) Men's necklaces

11) Buttons

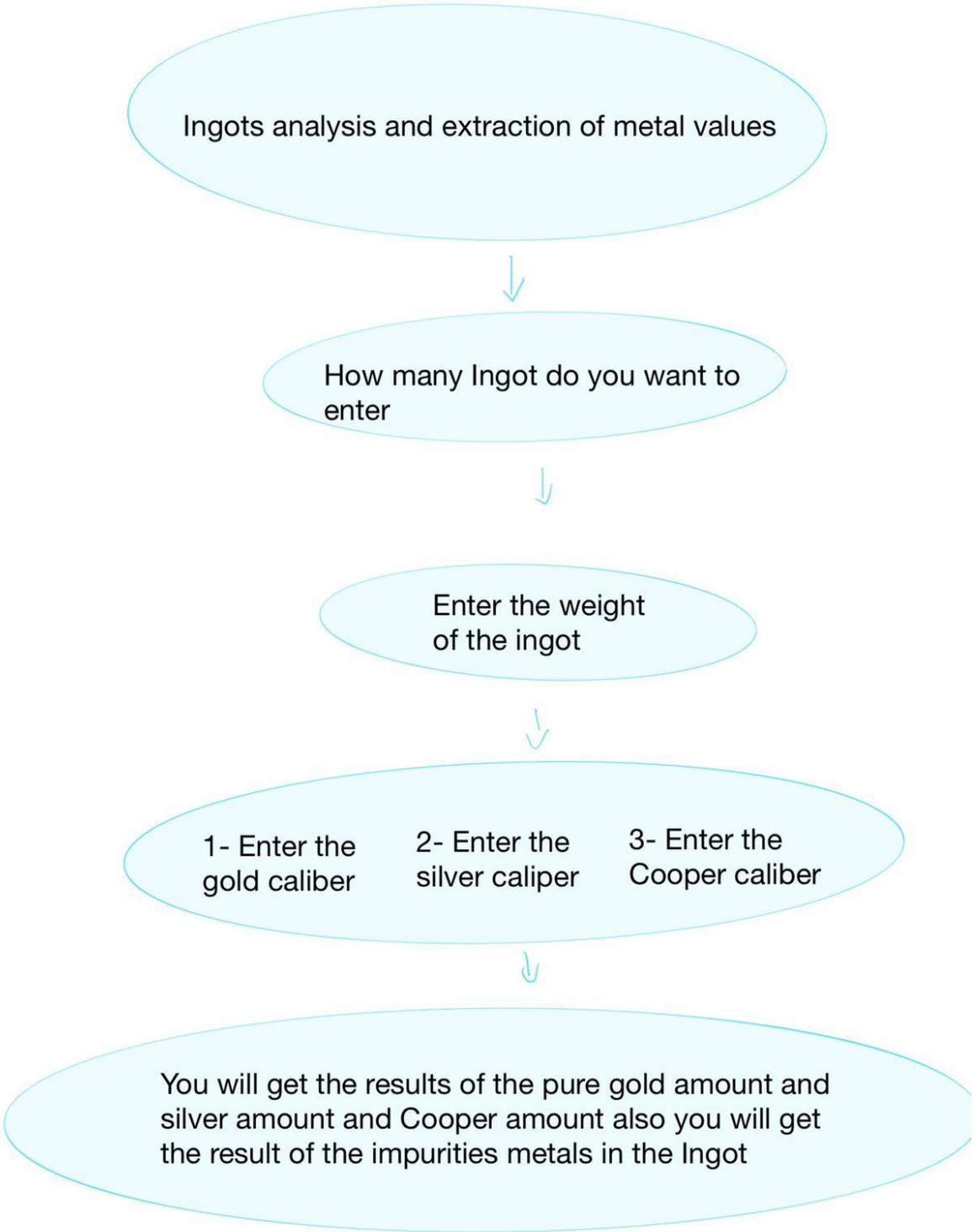
6- GOING BACK TO THE MAIN PAGE AND EXITING

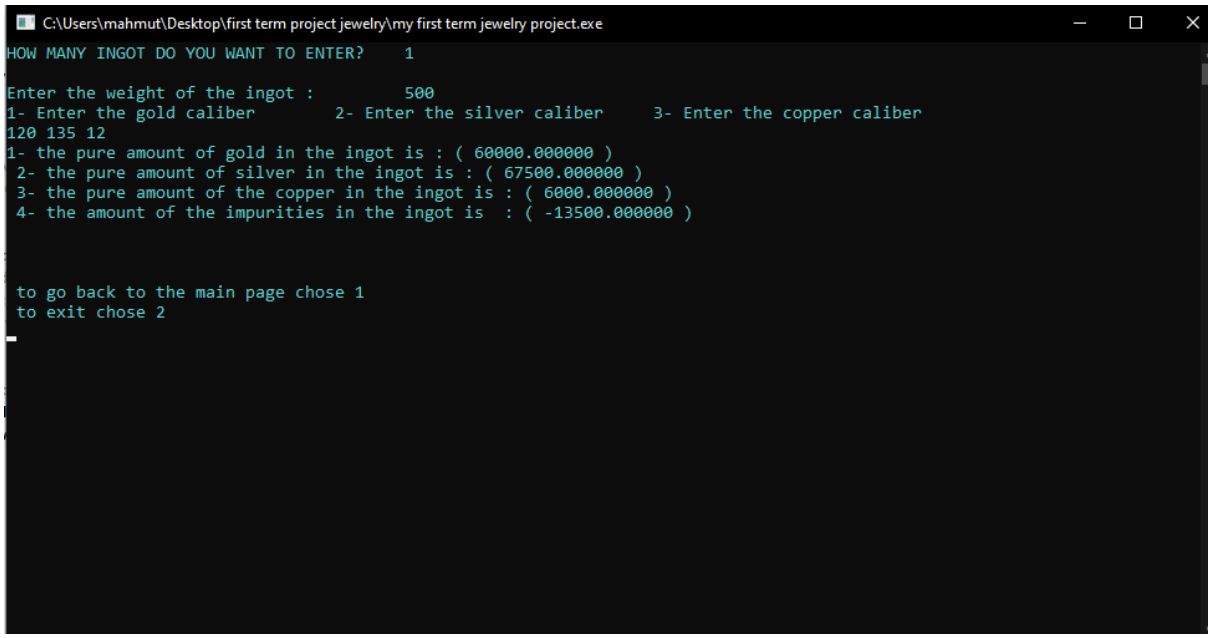



```
to go back to the main page chose 1
to exit chose 2
```

- This option is present in the first page of silver and gold systems. Also it will show up at the end of each function automatically. This option gives the user the ability to go back to the main page or exiting.

3.5 Ingot analysis and extraction of the metal value





- In this option the ingot will be analyzed for figure out the amount of pure gold, silver and copper. Also to identify the impurities in the ingot.
- To analyse the ingot the program will do the fallowing calculations: it will multiply each of gold, silver and copper calibers by ingot weight.

CHAPTER 4

CODE ANALYSIS:

Standart libraries I used :

```
#include <stdio.h>

#include <stdlib.h>

#include <string.h>

#include <time.h>
```

libraries I create:

```
#include "mylibrary.h"
```

- İn this library I put two functions which is
  1- void timetable(); // this function shows the specific date and time on the top of the screen.
  2- void password(); // this function allowed the user to enter his user name and password in order to enter to the program for security reasons.

Function declrations:

// this function has the first page that shoes up to the user immediately after he enters his login information correctly

```
void mainpage();
```

// this function gives all the choices the program can do related to the silver section.

```
void silver_system();
```

```
// this function gives all the choices the program can do related to the gold section.
void gold_system ();

// this function analysis the ingot.
void ingot ( );

// this function subtract two numbers to give the quantity difference and save them into a file for silver system.
void subsilver ();

// this function subtract two numbers to give the quantity difference and save them into a file for gold system.
void subgold();

// this function shows the total quantity diference that has been saved in the file and showes the quantity that left in the box.
void totalQuantitysilver();

// this function shows the total quantity diference that has been saved in the file and showes the quantity that left in the box.
void totalQuantitygold();
```

// this function change the amount of a particular piece of jewelry from grams and calculate its price in dollars.

void dollars ( );

// this function has a table that shows the wages to every single type of a gold jewelry.

void gold_wages();

// this function has a table that shows the wages to every single type of a silver jewelry.

void silver_wages();

// this function shows all types of jewelry that can be created in this company.

void type();

//this function change the amount of a particular piece of jewelry from grams and calculate its price in dollars

void dollar();

// this function

void goback();

//function of type struct pointer to allocate a space in the Ram to do some calculating used this function to both silver and gold systems

```
Doca *allocatememory (Doca*,int);
```

structs:

```
   //using struct to use the same variables multiple times to know the menufactoring wages for every single piece of jewelry in both gold and silver systems
struct wages
{
   char type [70];
   int price;
   float prices;
};

   //used this struct to do a list that contains all the jewelry types that
struct type
{
   char type [40];
};

   // I used struct to use the same variable multiple times to calculate the total price in dollars for both silver and gold systems
typedef struct
{
```

```
    float ONS;
    float grams;
    float wegs;
    int caliber;
}Doca; //struct to dollar calculating
```

MALLOC FUNCTİON:

```
Doca *allocatememory (Doca*p, int n)
{
    p = (Doca*) malloc(n*sizeof(Doca));
    return p;
}
```

//used this function to allocate memory that can be used several times and can be changed

Code for time function:

```
void timetable ()
{

    time_t now;
    time (&now);

    printf(" \t\t\t\t\t\t\t\t\t\t\t\t\t%s",ctime(&now));

}
```

Code for login system:

```
void password()
{
   char username [20];
   char password [10];
   int i;
   for (i=0;i<=5;i++)
   {
      printf("PLEASE ENTER YOUR USERNAME : ");
      scanf("%s",&username);
      printf("\nPLEASE ENTER YOUR PASSWORD : ");
      scanf("%s",&password);
      printf("\n\t\t_____\n");
      //if (!strcmp(username,"maryam_alrubaye") &&
!strcmp(password,"maryam"))
          if ( (strcmp(username,"maryam_alrubaye")==0) &&
(strcmp(password,"maryam")==0))
      {
       system("cls");
            printf ("SUCCESSFULLY LOGIN  \t\t {PRESS ANY TO GO TO
THE MAIN PAGE}\n\n");

            break;
```

```
        }
        else
        {
          system("cls");
            printf(" login is failed please try again\n");
        }
    }

    getch();
}
```

the main page code:

```
int main ()
{

    // calling function that shows the date and time on the top of the
screen
        timetable();
        system ("COLOR B");

printf("\t\t\t\t_____\n\n
");
```

```
   printf("\t\t\t\t  *****JEWELRY MANAGEMENT  SYSTEM
*****\n\a");

printf("\t\t\t\t_____\n\n
");


   // calling a function that has login system
   password();


   // using loops to give the user the ability to access to the program
and to try again if he enters wrong number.
  mainpage();


      return 0;
}
```

THE MAİN PAGE:

Code for the main page fanction:

```
void mainpage()
{
   int s;
   printf("\n_____\n");
   printf("CHOSE ONE OF THE FOLLOWING OPTIONS : \n\n ");
```

```
      printf("- FOR GOLD MANUFACTORING SYSTEM CHOSE 1 \n - FOE
SILVER MANAGEMENT SYSTEM CHOSE 2\n - FOR INGOT ANALYSIS
AND EXTRACTION  OF METAL VALUES CHOSE 3\n");
      scanf("%d",&s);


      if (s==1)
      {
          system("cls");


         // calling a function that has the gold management system in
it.
         gold_system ();


      }
   else if (s==2)
   {
      system("cls");
      //calling a function that has the silver management system
      silver_system();
   }
  else if (s==3)
   {
       system("cls");
     //calling function that analysis the ingot
       ingot ( );
```

```
    }
   else
    {
        system("cls");
        printf("wrong number please try again\n");
        fflush (stdin);
        mainpage(); //recalling the function again if the user enters
wrong number.
    }

}
```

JEWELRY MANAGEMENT SYSTEM CODES

The gold_system code:

```
void gold_system ()
{
    int m;
    printf("\n\n                                { GOLD MAMAGEMENT
SYSTEM }
\n_____________________________________________________________
_____________\n");
```

```
   printf("\n\n\n - FOR EVERY DAY TABLE CHOSE 1\n - FOR
CALCULATING THE TOTAL QUANTITY DIFERANCE CHOSE 2\n - TO
CHANG FROM GRAMS TO DOLLAR CHOSE 3\n - TO KNOW THE
MANUFACTORING WAGES CHOSE 4\n - TO KNOW THE AVAILABLE
TYPES OF JEWELRY FOR BOTH GENDERS CHOSE 5\n - TO GO BACK TO
THE MAIN PAGE CHOSE 6\n");
   scanf("%d",&m);
       if (m==1)
   {
               system("cls");
               subgold(); //calling function
   }
   else if (m==2)
   {
   system("cls");
   totalQuantitygold();
       }
   else if (m==3)
   {
       system("cls");
      dollars ();  //calling function
       }
   else if (m==4)
   {
           system("cls");
```

```
            gold_wages(); //calling function
    }
    else if (m==5)
    {
       system("cls");
       type(); //calling function
    }
    else if (m==6)
    {
       goback();
    }
        else
    {    system("cls");
       printf ("wrong number please try again\n");
       fflush (stdin);
       gold_system();
    }
}
```

1- everyday table code (subgold) functiin:

```
void subgold()
{
        float m,n,result=0,temp;
        int i,j,x,max=100;
        FILE *ptr;
```

```
        printf("                              WELCOME TO EVERYDAY
TABLE                                   \n\n");
        printf("HOW MANY PIECE OF JEWELRY DO YOU WANT TO
ENTER : (max=100) \t");
fflash(stdin);
 scanf("%d",&x);
if (x!=0&&x<max)
        {
        }
        else {
                system("cls");
                printf("wrong interd please again\n\n" );
                goto p;
        }
        printf("\n\nDO YOU WANT TO START FROM THE
BEGINING ? \t (Press 1 for yes Press 2 to countinue) : \t");
scanf("%d",&j);

        if (j==1)
        {
                ptr = fopen ("result1.txt","w");
        }
        else if (j==2)
        {
                ptr = fopen ("result1.txt","a");
        }
        for (i=0;i<x;i++)
        {
           printf("OUT-QUANTITY\t "); scanf("%f",&m);

           printf("IN-QUANTITY\t"); scanf("%f",&n);
```

```
            temp = m-n;
            result=result+temp;

            printf("\n\n THE QUANTITY DIFERENCES IS  =
%f\n",temp);
        }

        printf("\n");

        fprintf(ptr,"%f ",result );
        printf("\n THE TOTAL DIFERANCE QUANTITY IS =
%f\n",result);
        fclose (ptr);
        goback();

}
```

2- total Quantity differance (totalQuantitygold) function:

```
void totalQuantitygold()
{
        FILE *fpr;
        float sum =0,result=0;
        float j,f;
        fpr= fopen ("result1.txt","r");
        while (fscanf(fpr,"%f",&j)!=EOF)
        {
                sum+=j;
        }
        fclose(fpr);
```

```
        printf("ENTER THE TOTAL QUANTITY OF THAT YOU HAVE
IN THE BOX : ");
        scanf("%f",&f);

        result = f-sum;

        printf("the total Quantity diference is :  %f\n",sum);
        printf("the left quantity in the box is : %f\n",result);
        goback();
}
```

3- changes fron gram to dollar:

(dollars) function:

```
void dollars ( )
{
   Doca *p;
   int n,i,max=100;
   char c;
   float div,result;
m:
   printf("HOW MANY PIECE OF JEWELRY DO YOU WANT TO
ENTER? (max=100 \t");
fflash(stdin);
scanf("%s",&n);
if (n!=0&&n<max)
        {
        }
        else {
                system("cls");
                printf("wrong interd please again\n\n" );
                goto m;
        }
```

```
   p = allocatememory (p,n);

printf("\n_____
_____\n");
   printf("\n\n HERE YOU HAVE YOUR MANUFACTORİNG
WAGES FOR GOLD :  \n");
   FILE *ptr;
   ptr = fopen ("wages1.txt","r");
              while (c != EOF)
              {
                     printf("%c",c);
                     c=fgetc(ptr);
              }
              fclose (ptr);
       printf("\n_____
_____\n");
   for (i=0;i<n;i++)
   {
      printf("Enter the ONS price : \t");
      scanf("%f",&(p+i)->ONS );

      printf("Enter the amount of grams :\t");
      scanf("%f",&(p+i)->grams);

      printf("Enter the manufacturing wages : \t");
      scanf("%f",&(p+i)->wegs);
        printf("in which caliber you want to have your result?\n
chose one of the following list below:\n");
       printf("1) The 24 caliber\n 2) The 22 caliber\n 3)The 21
caliber\n 4)The 18 caliber\n 5) The 14 caliber\n 6) The 12
caliber \n 7) The 8 caliber\n ");
              printf("The gold caliber you want to get the price in :
\t");
```

```
scanf("%d",&(p+i)->caliber);
            printf("\n");
      if ((p+i)->caliber==24)
                  {
                     result = (((p+i)->ONS/31.1)*(p+i)-
>grams)*(p+i)->wegs;
               }
                  else if ((p+i)->caliber==22)
                  {
                     div = ((p+i)->ONS/31.1)*(p+i)->grams;
                        result = (div/0.916)*(p+i)->wegs;
                  }
               else if ((p+i)->caliber==21)
                  {
                        div = ((p+i)->ONS/31.1)*(p+i)->grams;
                        result = (div/0.875)*(p+i)->wegs;
                  }
                  else if ((p+i)->caliber==18)
                  {
                     div = ((p+i)->ONS/31.1)*(p+i)->grams;
                     result = (div/0.750)*(p+i)->wegs;
               }
               else if ((p+i)->caliber==14)
                  {
                     div = ((p+i)->ONS/31.1)*(p+i)->grams;
                     result = (div/0.585)*(p+i)->wegs;
                  }
         else if ((p+i)->caliber==12)
                  {
                        div = ((p+i)->ONS/31.1)*(p+i)->grams;
                        result = (div/0.500)*(p+i)->wegs;
                  }
```

```
                else if ((p+i)->caliber==8)
            {
                    div = ((p+i)->ONS/31.1)*(p+i)->grams;
                    result = (div/0.335)*(p+i)->wegs;
                }
                 else
               {
                printf("wrong number \n\n");
                }
                printf("\n\n THE RESULT IN USA Dollars IS  -> (
%f $ )",result);
      printf("\n");
}

  goback();
 }
```

4- Gold manufactoring wages: (gold_wages) function:

```
void gold_wages ()
{
   int n,d=1;
   struct wages w[5];
   FILE * wages1 ;
      wages1=fopen("wages1.txt","w+");


   printf("YOU CAN KNOW THE GOLD MANUFACTORING
WAGES FROM THE LIST BELOW :\n\n\n ");

   strcpy( w[0].type,"Gold polish");       //using strings to save
characters completed words
```

```
   w[0].price= 2;
   strcpy( w[1].type,"Gold polish and handmade");
   w[1].price= 3;
   strcpy( w[2].type,"Gold polish,handmade and laser");
   w[2].price= 4;
   strcpy( w[3].type,"Professional and high quality jewelry");
   w[3].price= 5;
   strcpy( w[4].type,"Special handmade jewelry");
   w[4].price= 8;
   for (n=0;n<5;n++)
   {
      printf("%d) the price of %s  is equal to -> ( %d $ )
\n",d+n,w[n].type,w[n].price);

   }
   for (n=0;n<5;n++)
   {

         fprintf(wages1,"%d) the price of %s  is equal to -> ( %d $
) \n",d+n,w[n].type,w[n].price);

   }
    fclose(wages1);

 goback();

}
```

5-Jewelry types (Types) function:

```
void type ()
{
```

```
int i,d=1;
printf("\nYOU CAN KNOW THW AVAILABLE TYPES OF JEWELRY
FROM THE LIST BELOW :\n");
   struct type t[11]
   strcpy( t[0].type,"Women's necklaces");
   strcpy( t[1].type,"Women's earrings");
   strcpy( t[2].type,"Women's rings");
   strcpy( t[3].type,"Women's bracelets");
   strcpy( t[4].type,"Women's anklets");
   strcpy( t[5].type,"Brooch");
   strcpy( t[6].type,"Men's earrings");
   strcpy( t[7].type,"Men's rings");
   strcpy( t[8].type,"Men's bracelets");
   strcpy( t[9].type,"Men's necklaces");
   strcpy( t[10].type,"Buttons");
   printf("\n                    \n       { For Women }       \n
\n");
   for(i=0;i<6;i++)
   {
      printf("%d) %s\n",d+i,t[i].type);
   }
   printf("\n                    \n       { For Men }       \n
\n");
  for(i=6;i<10;i++)
   {
      printf("%d) %s\n",d+i,t[i].type);
   }

   printf("\n                    \n       { For Both }       \n
\n");
   printf("11) %s",t[10].type);
```

```
 goback();
}
```

6- Go back to the main page or exit: (goback) function:

```
void goback()
{
   int f,k;
   for (k=0;k<5;k++)
   {

      printf("\n \n \n to go back to the main page chose 1\n to
exit chose 2\n");
          scanf("%d",&f);

          if (f==1)
          {
             system("cls");
             mainpage();
             break;
          }
          else if (f==2)
          {
             printf("\n press any to exit");
             exit(0);
          }
          else
          {
              printf("\n wrong number please try again");
              }
}
}
```

SILVER MANAGEMENT SYSTEM:

(silver_system) function:

```
void silver_system()
{
   int p;

        printf("\n\n                                        { SILVER
MAMAGEMENT SYSTEM }
\n_____________________________________________________________
_____________\n");
   printf("\n\n\n - FOR EVERY DAY TABLE CHOSE 1\n - FOR
CALCULATING THE TOTAL QUANTITY DIFERANCE CHOSE 2\n - TO
CHANG FROM GRAMS TO DOLLAR CHOSE 3\n - TO KNOW THE
MANUFACTORING WAGES CHOSE 4\n - TO KNOW THE AVAILABLE
TYPES OF JEWELRY FOR BOTH GENDERS CHOSE 5\n - TO GO BACK TO
THE MAIN PAGE CHOSE 6\n");
   scanf("%d",&p);

   if (p==1)
   {
              system("cls");
              subsilver(); //calling function
   }
   else if (p==2)
   {
      system("cls");
```

```
   totalQuantitysilver();
}
     else if (p==3)
{
            system("cls");
   dollar();
}
else if (p==4)
{
     system("cls");
            silver_wages(); //calling function
}
     else if (p==5)
{
   system("cls");
   type(); //calling function
     }
else if (p==6)
{
   goback();
}
      else
{
     system("cls");
```

```
            printf("wrong number please try again");
        fflush(stdin);
        silver_system();
    }

}
```

1- Every day table :

(subsilver) function:

```
void subsilver ()
{
   float m,n,result=0,temp;
   int i,j,b,max=100;
FILE *pt;
printf("HOW MANY PIECE OF JEWELRY DO YOU WANT TO
ENTER: \t "); scanf("%d",&b);
p:
printf("DO YOU WANT TO START FROM THE BEGINING ? \t
(Press 1 for yes Press 2 to countinue) : ");
fflush(stdin);
scanf("%d",&j);
if (j!=0&&j<max)
   {
   }
   else {
         system("cls");
         printf("wrong interd please again\n\n" );
         goto p;
   }
if (j==1)
{
```

```
    pt = fopen ("result.txt","w"); // the user could chose
between deleting the file contant by using writing mood or
keep them and add to them by chossing append mood.
}
else if (j==2)
{
    pt = fopen ("result.txt","a");
}
   for (i=0;i<b;i++)
   {
   printf("OUT-QUANTITY : \t "); scanf("%f",&m);

   printf("IN-QUANTITY : \t"); scanf("%f",&n);

   temp = m-n;
   result=result+temp;

   printf("\n THE QUANTITY DIFERENCE IS = %f\n\n",temp);
   }

   printf("\n");
    fprintf(pt,"%f ",result ); //the sum of the results will be
saved in a file
   printf("\n THE TOTAL DIFERENCE IS = %f\n",result);
   fclose (pt);

    goback(); //calling a function that contains to options one
to exit and the ather one to go back to the main page

}
```

2- Total quantity differances : (totalQuantitysilver) function:

```
void totalQuantitysilver()
{
    FILE *fp;
    float sum =0,result=0;
    float z,f;

    fp= fopen ("result.txt","r"); //read the numbers that has
been saved in the result file which came from the sum of the
out&in quantity differance

    while (fscanf(fp,"%f",&z)!=EOF)
    {
            sum+=z;
    }
    fclose(fp);

    printf("ENTER THE TOTAL QUANTITY OF THAT YOU HAVE
IN THE BOX : ");
    scanf("%f",&f);
    result = f-sum;
    printf("the total Quantity diference is :  %f\n",sum);
    printf("the left quantity in the box is : %f\n",result);

    goback();
}
```

3- Changes from gram to dollar (dollar) function:

```
void dollar ()
{
```

```
    Doca *p;
   int i,max=100,n;
   float div,result;
   char c;
m:
   printf("HOW MANY PIECE OF JEWELRY DO YOU WANT TO
ENTER? ");
fflush(stdin);
   scanf("%d",&n);
if (n!=0&&n<max)
   {
   }
   else {
          system("cls");
          printf("wrong interd please again\n\n" );
          goto m;
   }
   p = allocatememory (p,n);
   printf( "\n\nHERE YOU HAVE YOUR MANUFACTORING
WAGES\n");
   FILE *fp;
   fp=fopen("wages2.txt","r");
   if (fp==NULL)
   {
          printf("WARNING!!\tcan not open this file!");
          }
          c = fgetc(fp);
          while (c != EOF)
          {
                 printf("%c",c);
                 c=fgetc(fp);
          }
```

```
    fclose(fp);



   for (i=0;i<n;i++)
   {
      printf("\nEnter the ONS price : \t");
      scanf("%f",&(p+i)->ONS );

      printf("\nEnter the amount of grams : \t");
      scanf("%f",&(p+i)->grams);

      printf("\nEnter the manufacturing wages : \t");
      scanf("%f",&(p+i)->wegs);
      div= ((p+i)->ONS/31.1)*0.925;
      result = (div*(p+i)->grams)*(p+i)->wegs;
      printf("YOUR FINAL RESULT IS : %f $\n",result);

    }
     goback();
  }
```

4- Silver manufactring wages: (silver_wages)

```
void silver_wages ()
{
   int n,d=1;
printf("YOU CAN KNOW THW SILVER MANUFACTORING
WAGES FROM THE LIST BELOW :\n ");

   struct wages w[5];
   FILE * wages2 ;
```

```
        wages2=fopen("wages2.txt","w+");

        strcpy( w[0].type,"Silver polish");
        w[0].price=1;
        strcpy( w[1].type,"Silver polish, and handmade");
        w[1].price= 2;
        strcpy( w[2].type," polish, laser and handmade");
        w[2].price= 3;
        strcpy( w[3].type,"Professional handmade");
        w[3].price= 4;
        strcpy( w[4].type,"special handmade");
        w[4].price= 5;
           for (n=0;n<5;n++)
    {
        printf("%d) the price of %s  is equal to -> ( %d $ )
\n",d+n,w[n].type,w[n].price);
    }
    for (n=0;n<5;n++)
    {

         fprintf(wages2,"%d) the price of %s  is equal to -> ( %d $
) \n",d+n,w[n].type,w[n].price);

    }
     fclose(wages2);


    goback();

}
```

5&6- used the same functions as gold management system.

INGOT ANALYSIS:

(ingot) function:

```
void ingot ( )
{
   float x,y,h,m,result1,result2,result3,result4;
   int j,f,i,max=100;
p:
   printf("HOW MANY INGOT DO YOU WANT TO ENTER? \t");
   scanf("%d",&j);
if (j!=0&&j<max)
   {
   }
   else {
          system("cls");
          printf("wrong interd please again\n\n" );
          goto p;
   }

      for (i=0;i<j;i++)
         {

            printf("\nEnter the weight of the ingot : \t");
scanf("%f",&x);

            printf("1- Enter the gold caliber\t 2- Enter the silver
caliber\t 3- Enter the copper caliber\n");
            scanf("%f %f %f", &y,&h,&m);

            result1= x*y;
            result2=x*h;
            result3=x*m;
```

```
            result4= result1 - result2 - result3;

            printf("1- the pure amount of gold in the ingot is : (
%f )\n 2- the pure amount of silver in the ingot is : ( %f )\n 3-
the pure amount of the copper in the ingot is : ( %f )\n 4- the
amount of the impurities in the ingot is  : ( %f )\n ",
result1,result2,result3,result4);

          }
 goback();

}
```

CHAPTER 5
Conclusion

As a conclusion this program wil help the workshop by making every calculation and data in its place also it will reduce the error rate by 99%.
A jewelry workshop in a program that contains two systems The first system is for gold management and the second one is the silver management system both of tham contains the every day table which is will be saved in a file in order to calculate the total quantity loss as explained befor also it contains the manufactoring wages for both the silver and gold systems, also in both system the user can calculate and know the total price by changing it from grams to dollars at this specific point each system has its own method and calculations as explained before.

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