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/*
ID: s3603751
Name: Yelong Qian
version: Ass_part2_v6
Program: Overtime salary calculator
*/

#include <cstdlib>
#include <iostream>

using namespace std;

int main(int argc, char *argv[])
{
    //variable decorator
    int weekWork = 0;
    int weekend = 0;
    int overtime = 0;
    int i;
    int weekWorkOut = 0;
    int weekTotal = 0;
    int totalOvertime = 0;
    int totalSalary = 0;
    int totalMonth = 0;
    int repeat;
    const int MAX = 7;
    const int MIN = 2;
    int j = 2;

    repeat = rand()%(MAX-MIN+1)+2; //random number

    while(j++ < repeat)
    {
        for(i=1;i<=4;i++)
        {
            cout << "Week" << i << endl;//show which week

            //start loop intput
            while(1)
            {

                //input weekWork
                cout << "Total hours worked Mon-Fri? ";
                cin >> weekWork;

                //input weekend
                cout << "Hours worked overtime on weekend? ";
                cin >> weekend;

                //input condition & loop break
                if(weekWork <= 46 && weekend <= 16)
                {
                    break; //while loop stop
                }
                else
                {
                    weekWork = 0;//set to 0 if condition is wrong(
important for total month)
                    weekend = 0;//set to 0 if condition is wrong(
importan foe total salary)
```

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                    cout << "Incorrect entry: weekday OT hours must be
less than 10, weekend OT must be less that 16" << endl;
                    cout << "Please re-enter" << endl;
                }//end if
            }//end loop

            //weekwork condition fix
            if(weekWork <= 35)
            {
                weekWorkOut = weekWork;
            }
            else if( weekWork >= 36)
            {
                weekWorkOut = 36;
            }//end if

            //headache start
            //total hours overtime in week
            overtime = weekWork - weekWorkOut;
            totalOvertime = weekWork - weekWorkOut + weekend;
            cout << "Overtime hours worked this week: " << totalOvertime
<< endl;//output overtime

            //total salary in week
            weekTotal = weekWorkOut * 20 + overtime * 1.5 * 20 + weekend
* 2 * 20;
            cout << "Weekly salary: " << weekTotal <<endl;// output week
salary
            cout << " " << endl;

            //loop back counter
            totalOvertime = totalOvertime + totalMonth;
            totalMonth = totalOvertime;

            weekTotal = weekTotal + totalSalary;
            totalSalary = weekTotal;
            //end headache!!

            //total hours & total salary
            if(i==4)
            {
                cout << "Overtime worked this month: " << totalMonth << "
hours" << endl;//output overtime in a month
                cout << "Salary this month is $" << totalSalary <<
endl;//output total salary in month
                cout << "Program ended with exit code: 0" << endl;
            }//end if
        }
        weekTotal = 0;
        totalSalary = 0;
        cout << " " << endl;
    }//end loop

    system("PAUSE");
    return EXIT_SUCCESS;
}
```

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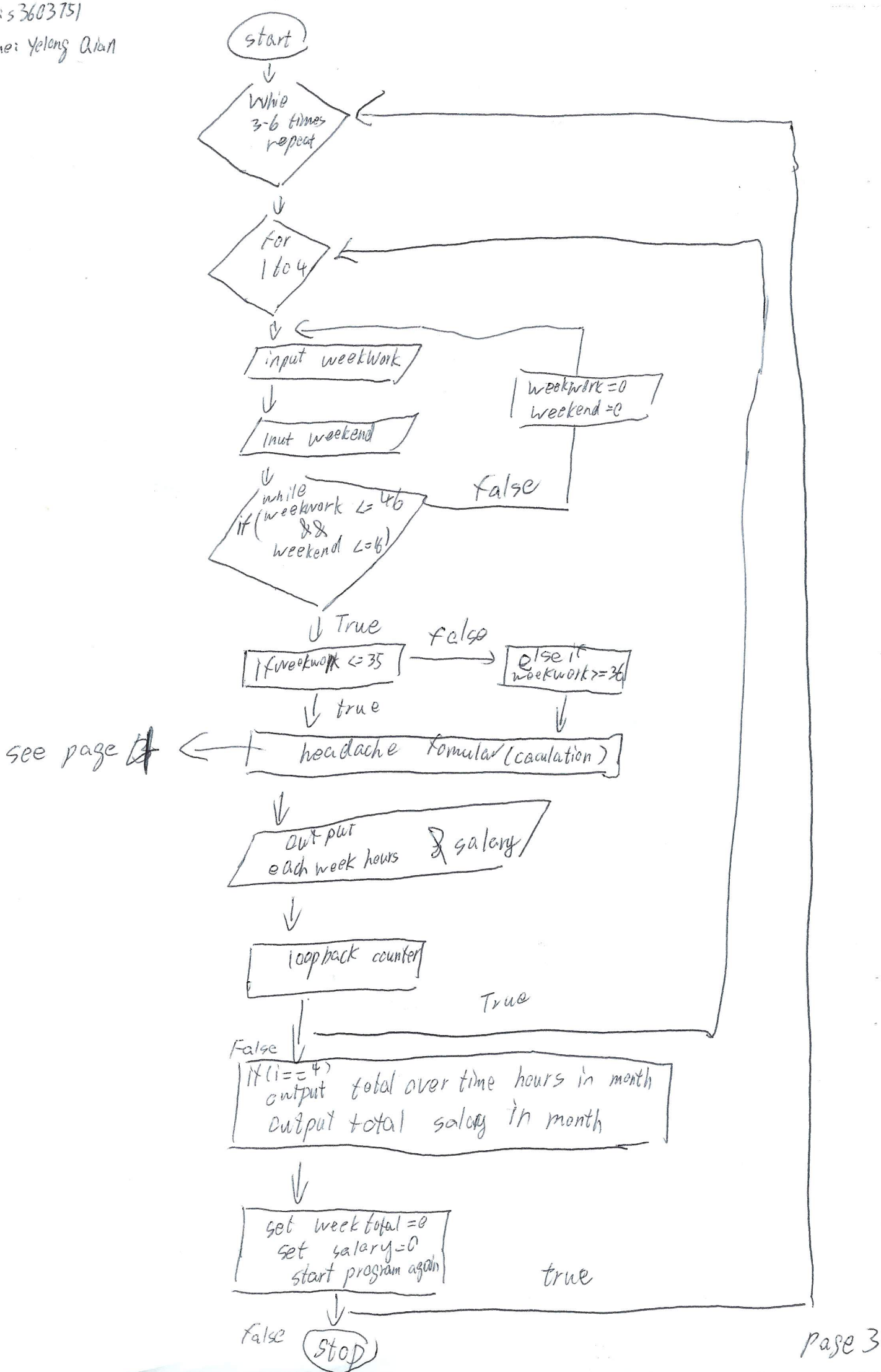

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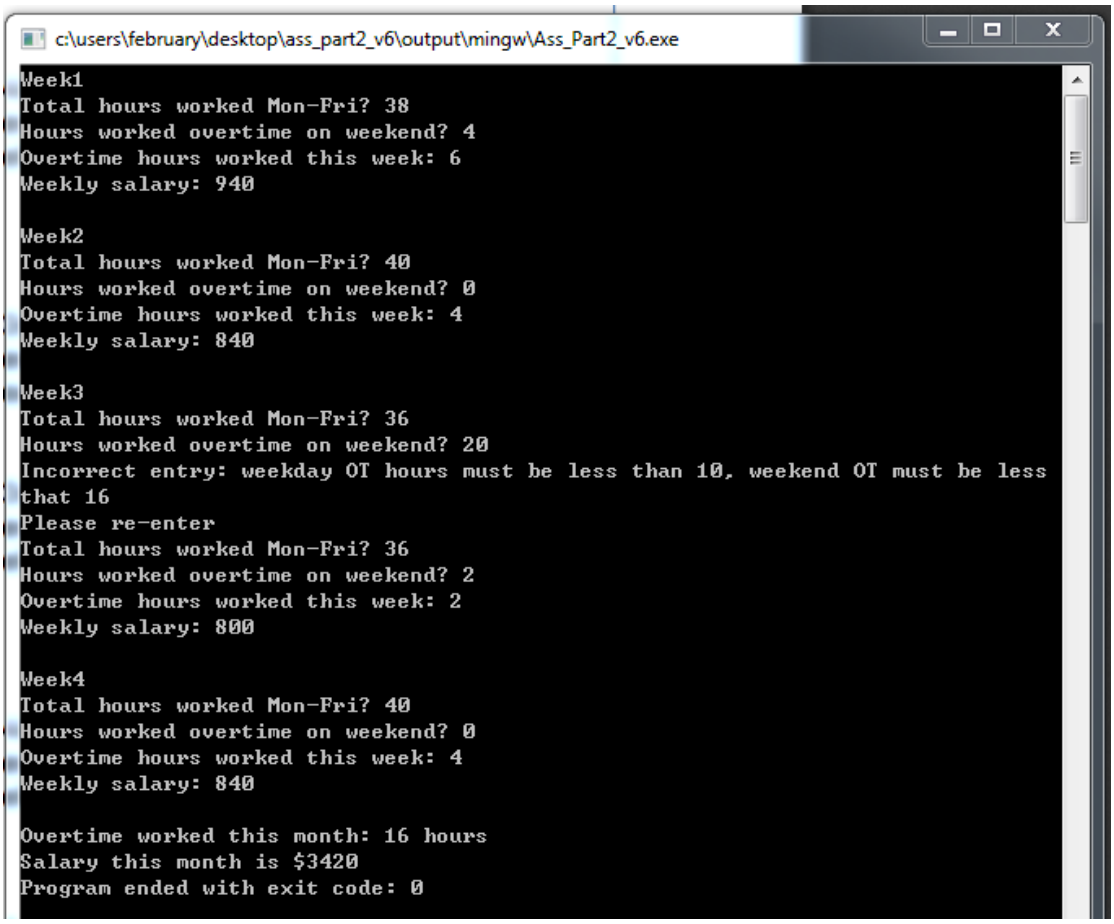
Input	process	Output
weekWork	weekWorkOut	weekTotal
Weekend	Overtime	totalOvertime
		totalMonth
		totalSalary

```
// Process in page 3
// headache fomular
    // week hours
    overtime = weekWork - weekWorkout ;
    totalOvertime= weekWork - weeWorkOut + Weekend;

    // total selery in week
    weekTotal =weekWork Out *20 + Overtime *1.5 * 20+
     weekend * 2 * 20;
```


c:\users\february\desktop\ass_part2_v6\output\mingw\Ass_Part2_v6.exe
Week1
Total hours worked Mon-Fri? 38
Hours worked overtime on weekend? 4
Overtime hours worked this week: 6
Weekly salary: 940
Week2
Total hours worked Mon-Fri? 40
Hours worked overtime on weekend? 0
Overtime hours worked this week: 4
Weekly salary: 840
Week3
Total hours worked Mon-Fri? 36
Hours worked overtime on weekend? 20
Incorrect entry: weekday OT hours must be less than 10, weekend OT must be less
that 16
Please re-enter
Total hours worked Mon-Fri? 36
Hours worked overtime on weekend? 2
Overtime hours worked this week: 2
Weekly salary: 800
Week4
Total hours worked Mon-Fri? 40
Hours worked overtime on weekend? 0
Overtime hours worked this week: 4
Weekly salary: 840
Overtime worked this month: 16 hours
Salary this month is $3420
Program ended with exit code: 0