SESSION 2020/2021 SEMESTER 1

COURSE CODE

SECJ1013 – PROGRAMMING TECHNIQUE

LECTURER'S NAME

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GROUP ASSIGNMENT

TOPIC

ASSIGNMENT 2

NAME	MATRIC NUMBER
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SECTION

08

QUESTION

Case study 8

Create a flowchart based on the calculation of Summon fees restricted to below conditions

- The user will input the type of Summons based on table below. Any other type is not acceptable

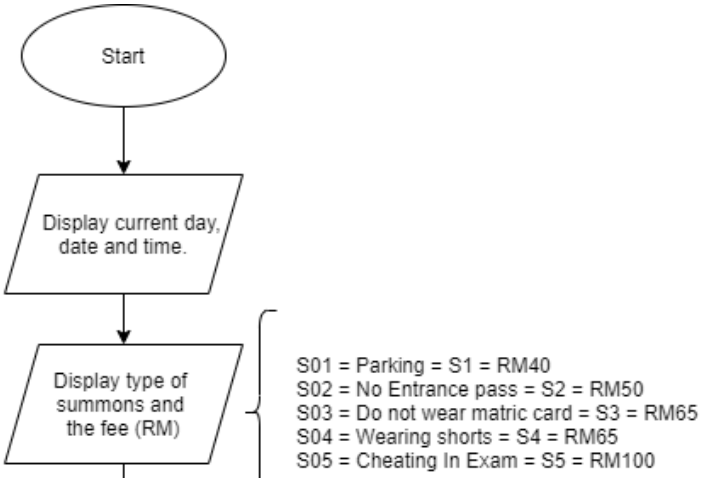
Summons Type	Summons Fees (RM)
Parking	40
No Entrance Pass	50
Do not wear Matric Card	65
Wearing Shorts	65
Cheating during Exam	100

Table 7: Summons Fees

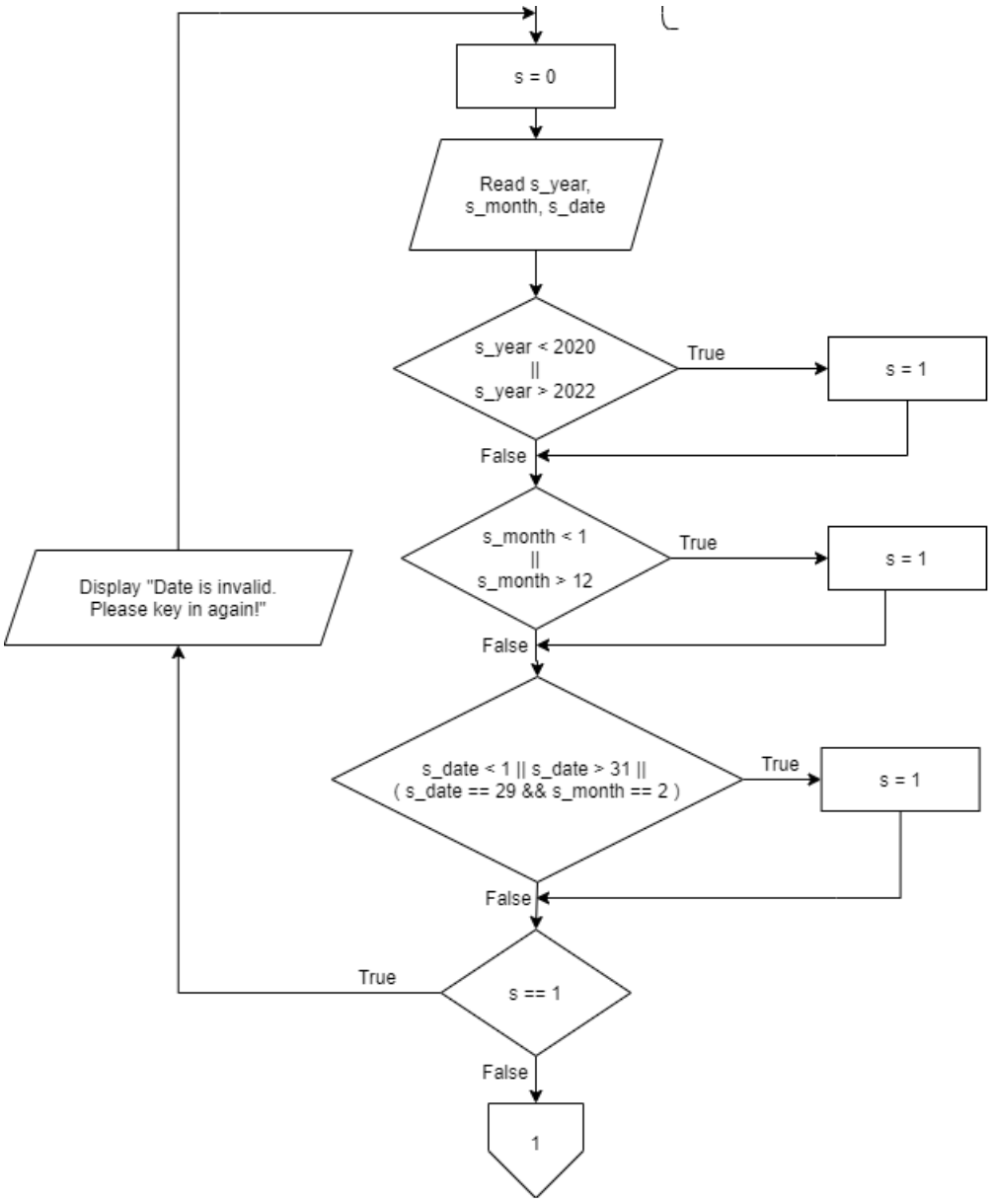
- The user will also input time of Summons (24HRS system. Example: 10 pm is 2200). If the time is after or before office hour (8 am-5pm). The fees will be doubled from Table 7.

- Then the input the date of summons and the date of payment in this format. Day : (Monday to Sunday), Year: (2020-2022), Month: (1-12), Date(1-28,30,31). Any value out or range is invalid

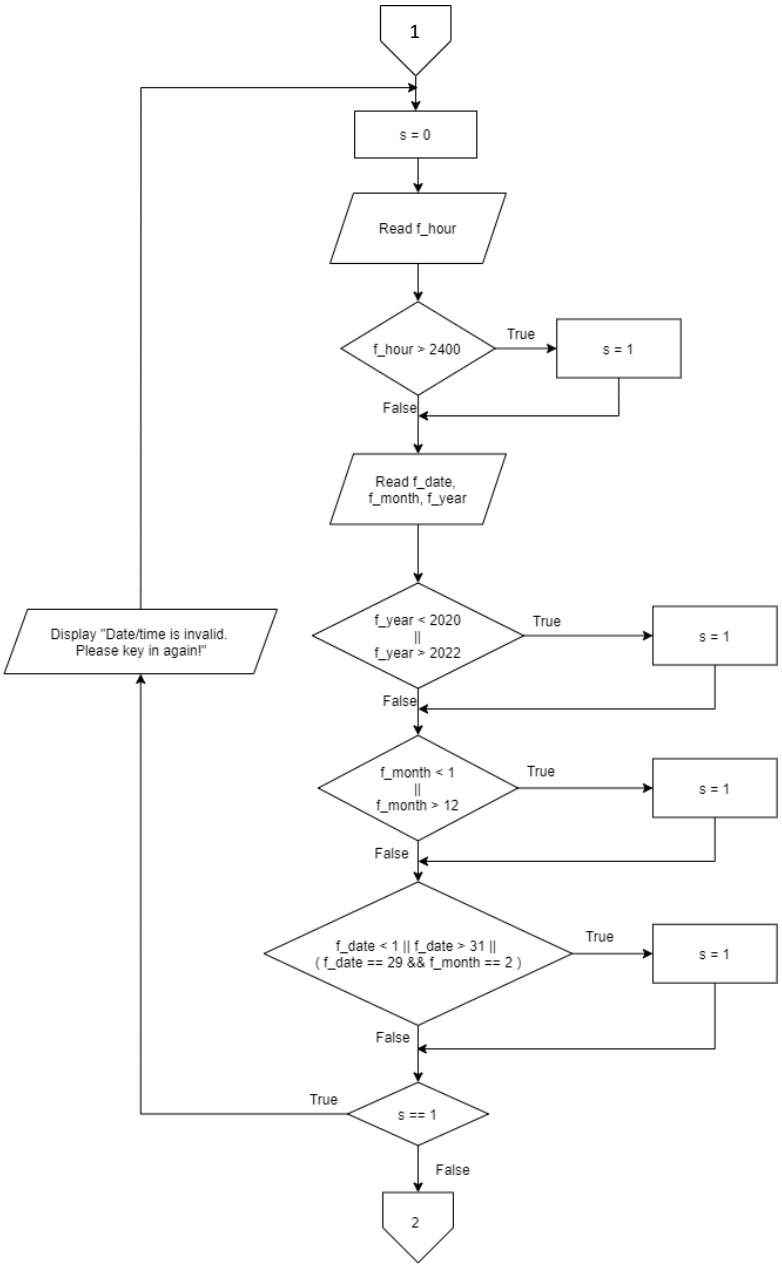
- If the difference is not more than or 2 days, the fees will be discounted for 30% off.



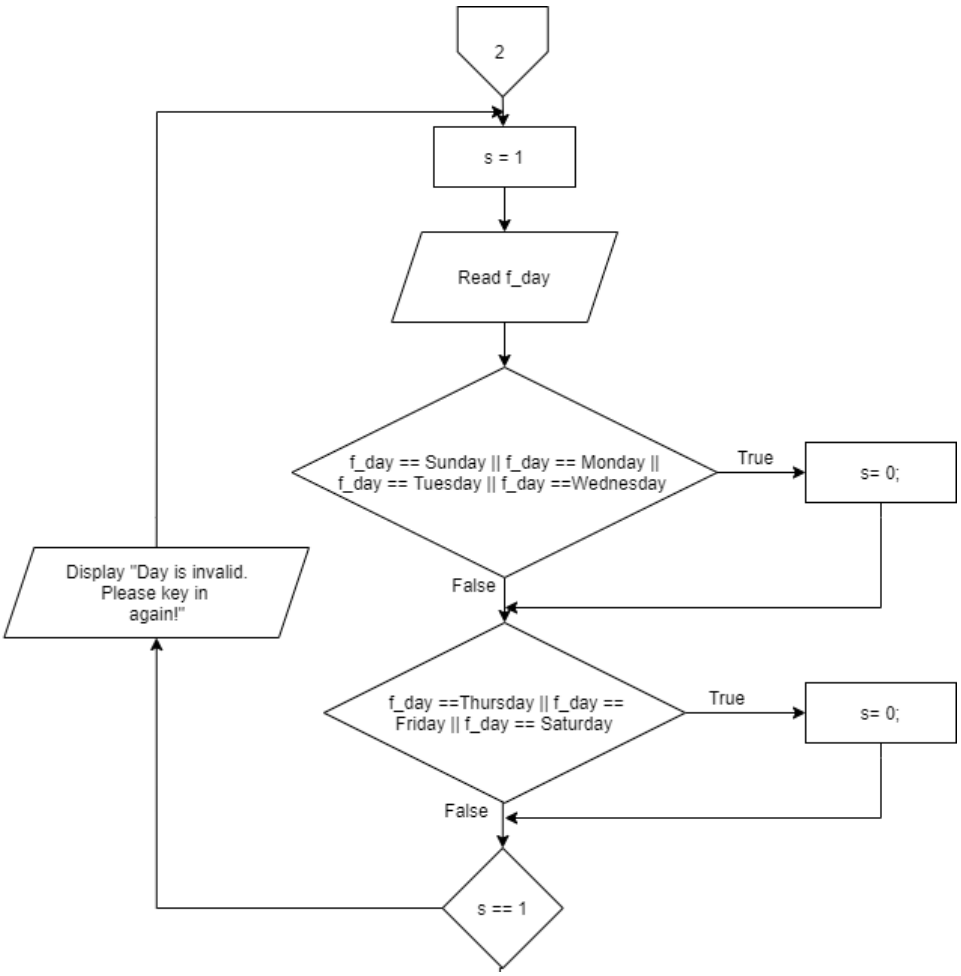

```cpp
/*****************************************************************************/
/* Name    : Ieskandar Zulqarnain Bin Ghazali (A20EC0046)                    */
/*           Aiman Na'im Bin Ariffin (A20EC0008)                             */
/*           Syaza Syaurah Binti Mohd Yusran (A20EC0227)                     */
/* Section : 08                                                              */
/*****************************************************************************/
#include <iostream>
#include <ctime>
#include <iomanip>
using namespace std;

int main(){

    time_t now = time(0);
    char* dt = ctime(&now);

    cout << "Welcome!!\n";
    cout << "\nThe local date and time is: " << dt << endl;

    cout << "Code |" << "Summons Type              |" << "  Summons Fee (RM)" << endl;
    cout << "S01  |" << "Parking                   |" << "  40 " << endl;
    cout << "S02  |" << "No Entrance Pass          |" << "  50 " << endl;
    cout << "S03  |" << "Do not wear Matric Card   |" << "  65 " << endl;
    cout << "S04  |" << "Wearing Shorts            |" << "  65 " << endl;
    cout << "S05  |" << "Cheating during Exam      |" << "  100 \n" << endl;

```



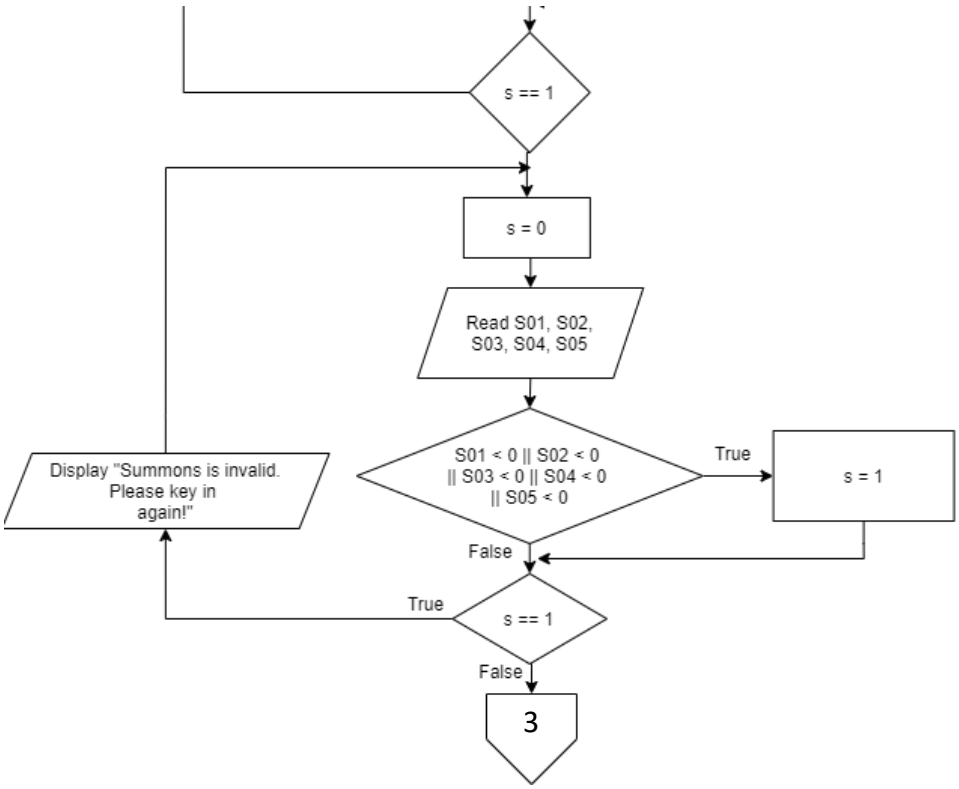

```
26
27      int S01, S02, S03, S04, S05; // Declaration of the variables
28      S01 = 0;
29      S02 = 0;
30      S03 = 0;
31      S04 = 0;
32      S05 = 0;
33
34      double S1, S2, S3, S4, S5; // Declaration of the variables
35      S1 = 40;
36      S2 = 50;
37      S3 = 65;
38      S4 = 65;
39      S5 = 100;
40
41      double payment;
42      int f_hour = 0 ,s_date = 0, s_month = 0, s_year = 0; // Declaration of the variables
43      int f_date = 0, f_month = 0, f_year = 0;
44      string f_day;
45      int s;
46
47          do
48          {
49              s = 0;
50              cout << "Enter the date(eg : 31 12 2020) of summons between 2020 - 2022:" << endl;
51              cin  >> s_date >> s_month >> s_year; //user need to input relevant date,month and year
52
53              if(s_year < 2020 || s_year > 2022) //if user enter less than 2020 and more than 2022, the output would be s=1
54              {
55
56                  s = 1;
57              }
58
59              if(s_month < 1 || s_month > 12) //if user enter less than 1 and more than 12, the output would be s=1
60              {
61
62                  s = 1;
63              }
64
65              if(s_date < 1 || s_date > 31 || (s_date==29 && s_month == 2)) //if user enter less than 1 and more than 31 and same with the value 29, the output would be s=1
66              {
67
68                  s = 1;
69              }
70
71              if( s == 1)
72              {
73
74                  cout << "\nDate is Invalid\n" << "Please Key in again!\n\a" << endl; //if s=1, the output will be invalid
75              }
76
77          }while(s == 1);
78
```



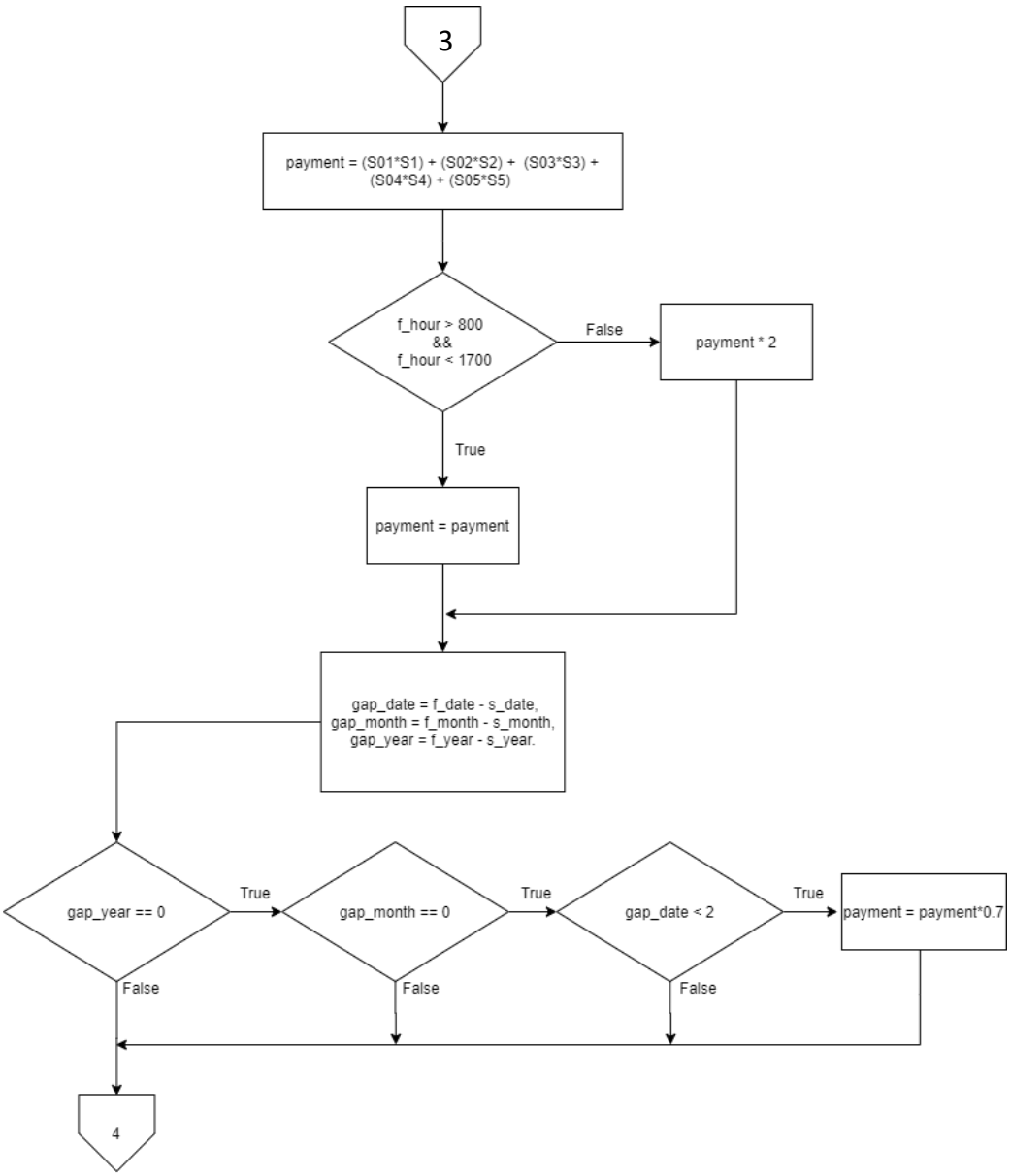

```
79      do
80      {
81          s = 0;
82          cout << "\nEnter the payment time(2400 Hrs System) :" << endl;
83          cin >> f_hour; //user need to input relevant time
84
85          if (f_hour > 2400) //if user enter more than 2400, the output would be s=1
86          {
87
88              s =1;
89          }
90
91          cout << "\nEnter the date of your payment (eg : 31 12 2020) : " << endl;
92          cout << "Note : The payment year must between 2020 - 2022" << endl;
93          cin >> f_date >> f_month >> f_year;
94
95          if(f_year < 2020 || f_year > 2022) //if user enter less than 2020 and more than 2022, the output would be s=1
96          {
97
98              s = 1;
99          }
100
101         if(f_month < 1 || f_month > 12) //if user enter less than 1 and more than 12, the output would be s=1
102         {
103
104             s = 1;
105         }
106
107         if(f_date < 1 || f_date > 31 || (f_date==29 && s_month == 2)) //if user enter less than 1 and more than 31 and same with the value 29, the output would be s=1
108         {
109
110             s = 1;
111         }
112
113         if( s == 1)
114         {
115
116             cout << "\nDate/time is Invalid\n" << "Please Key in again!\n\a" << endl; //if s=1, the output will be invalid
117         }
118
119     }while(s == 1);
120
```



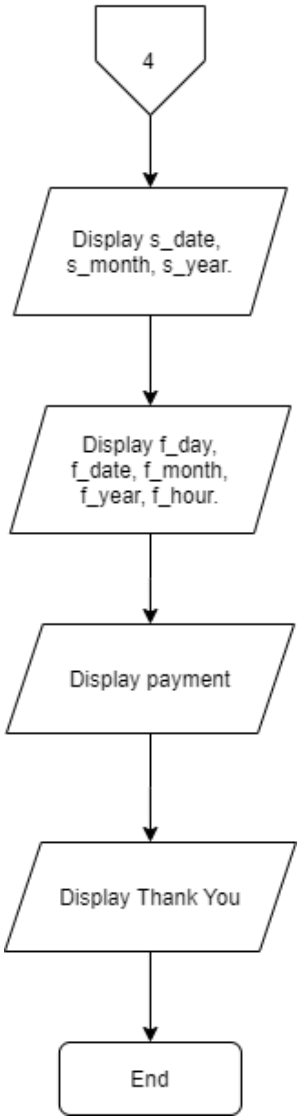

```
121         do
122         {
123             s = 1;
124             cout << "\nEnter the day of your payment (Eg: Sunday) : " << endl;
125             cin >> f_day; //user need to input relevant day
126 
127             if (f_day == "Sunday")
128             {
129 
130                 s = 0;
131             }
132 
133             if (f_day == "Monday")
134             {
135 
136                 s = 0;
137             }
138 
139             if (f_day == "Tuesday")
140             {
141 
142                 s = 0;
143             }
144 
145             if (f_day == "Wednesday")
146             {
147 
148                 s = 0;
149             }
150 
151             if (f_day == "Thursday")
152             {
153 
154                 s = 0;
155             }
156 
157             if (f_day == "Friday")
158             {
159 
160                 s = 0;
161             }
162 
163             if (f_day == "Saturday")
164             {
165 
166                 s = 0;
167             }
168 
169             if( s == 1)
170             {
171 
172                 cout << "\nDay is Invalid\n" << "Please Key in again!\n\a" << endl; //if s=1, the output will be invalid
173             }
174 
175         }while(s == 1);
```




```
170
171         do
172         {
173             s = 0;
174             cout << "\nPlease enter the Summons type base on Code : " << endl; //user have to put how much they get on each summons
175             cout << "How much *Parking* summons did you get ?" << endl;
176             cin >> S01;
177             cout << "How much *NO Entrance Pass* summons did you get ?" << endl;
178             cin >> S02;
179             cout << "How much *Do not wear Matric Card* summons did you get ?" << endl;
180             cin >> S03;
181             cout << "How much *Wearing Shorts* summons did you get ?" << endl;
182             cin >> S04;
183             cout << "How much *Cheating during Exam* summons did you get ?" << endl;
184             cin >> S05;
185
186                 if( S01 < 0 || S02 < 0 || S03 < 0 || S04 < 0 || S05 < 0 ){
187
188                     cout << "Summons Invalid\n" << "Please Key in again!\n\a" << endl; //if s=1, the output will be invalid
189                     s = 1;
190                 }
191
192         } while ( s == 1 );
193     //while(f_hour > 2400 || (f_year < 2020 && f_year > 2022) || (f_month < 1 && f_month > 12) || (f_date < 1 && f_date > 31));
194
```




```
200     payment = (S01*S1) + (S02*S2) + (S03*S3) + (S04*S4) + (S05*S5);
201
202     if(f_hour > 800 && f_hour < 1700)
203     {
204         payment = payment; //calculation if pay at the right time
205     }
206     else
207     {
208         payment = payment * 2; //calculation if pay at the wrong time
209     }
210
211     double gap_date; // Declaration of the variables
212     double gap_year, gap_month;
213
214     // to calculate whether it have gap between to day
215     gap_date = f_date - s_date;
216     gap_month = f_month - s_month;
217     gap_year = f_year - s_year;
218
219         if(gap_year == 0)
220         {
221
222             if(gap_month == 0)
223             {
224
225                 if(gap_date < 2)
226                 {
227
228                     payment = payment * 0.7; //calculation if pay early
229                 }
230             }
231         }
```




```
232
233         cout << "\nYour summons on " << s_date << "/" << s_month << "/" << s_year << endl; //display the date of summons which user
234         cout << "\nYour summons pay on " << f_day << " " << f_date << "/" << f_month << "/" << f_year << "  " << f_hour << endl; //
235
236         cout << "Your Summons fees you must pay is : RM" ; //display the amount of summons which user hadve to pay
237         cout << setprecision(2) << fixed; //  to set the decimal point in 2 decimal places
238         cout << payment << endl;
239
240         cout << "Thank you!!";
241         return 0;
242
243     }
```