

ESFP-I (2CSE102) –PROJECT

TOPIC: TIMETABLE MANAGEMENT SYSTEM

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Introduction:

Timetable generator automatically schedules timetable for faculty which reduces the manual work. once the inputs like faculty with their respective subjects are given it will generate the period slots for the entire week and also for the substitution hours.

Abstract:

The timetable is needed to be scheduled in such a way that the number of different courses with a number of subject in each, handled by a limited faculty provided with their slots and timing does not overlap.

ALGORITHM FOR PROJECT

Step 1: Start

Step 2: Define structure school.

Declare t_name,incharge,s_period, f_period,std,m_num.

And structure variable s.

Step 3: Declare variables sec, load, sub_num, tload, eng, jun;

Step 4: Read s.t_name, sec,s. incharge, load, s.s_period, s.m_num, std,

s.f_period, sub,sub_num from the user.

Step 5: If load>36

Increment s.f_period by 2.

Step 6: If s.s_period > 4

display there can not be 4 substitute periods.

Goto re_s_period; and Re-Enter the value from the user for s.s_period.

Step 7: If sub=="english" &&load > 2

display there should not be more than two periods a week assigned to a single teacher.

Step 8: if section=="junior"

display that the junior teacher can not teach in the "senior" section but can assign a substitute period in primary.

Step 9: Calculate total load of the month by equation.

tload=(load*4)-(s.f_period*4);

Step 10: Display the s.t_name, sec, s.incharge, load, s.s_period, m_num,

std, s. f_period, sub, s.std, s.m_num, sub_num, tload.

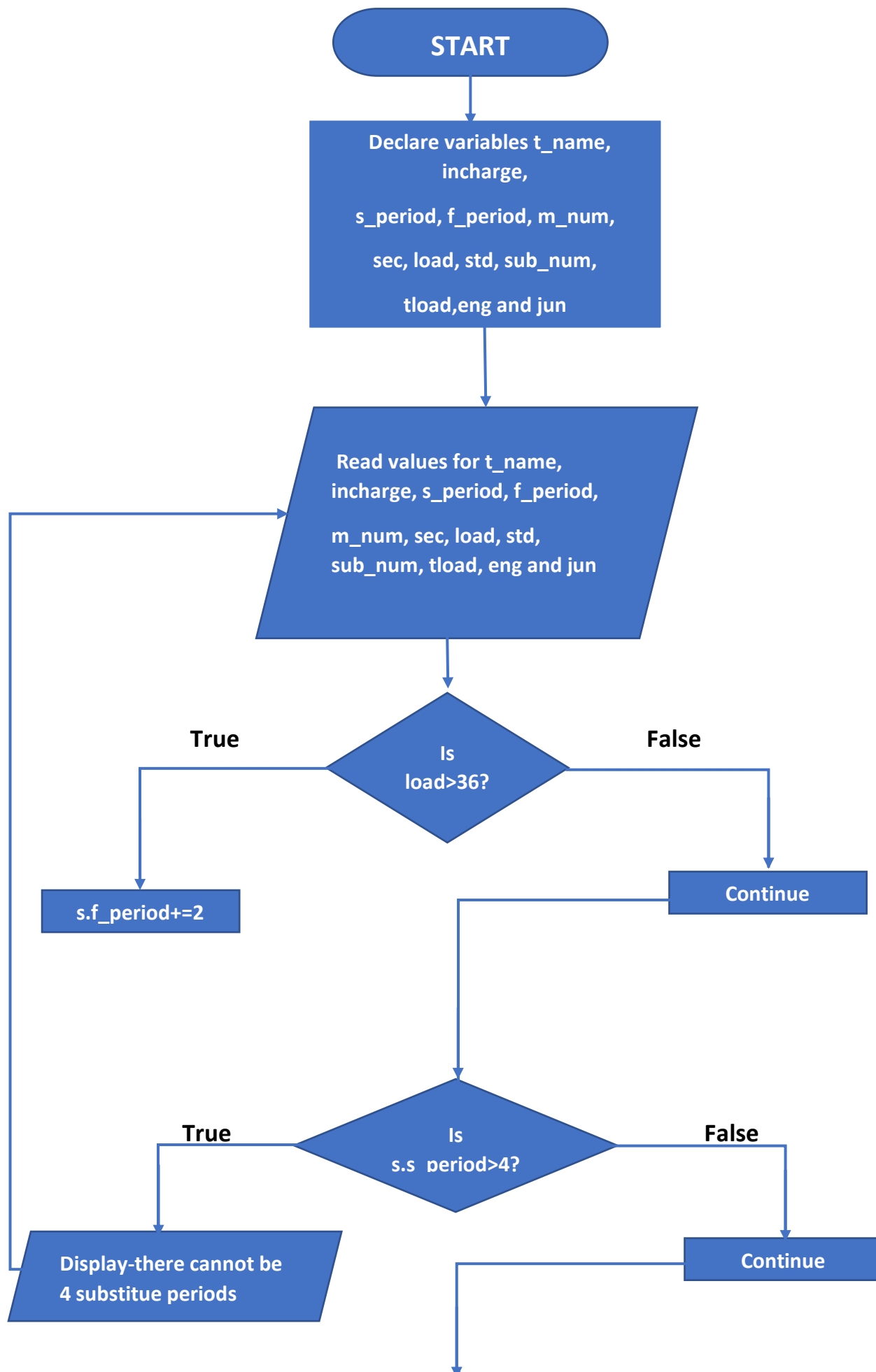
Step 11: Stop.

Project-Q7

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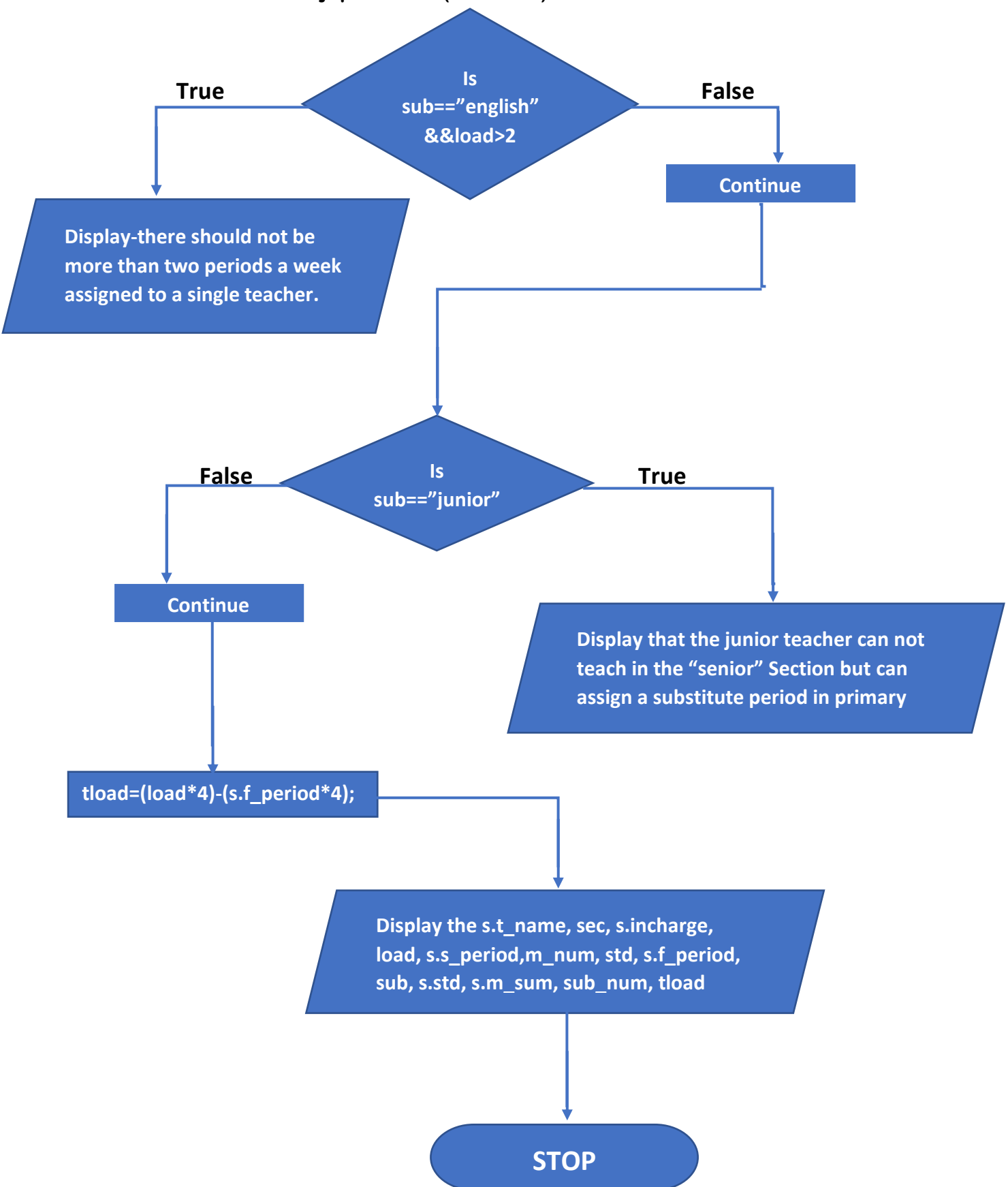


Project-Q7

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SOURCE CODE:

```

#include <stdio.h>
#include <string.h>
#include <conio.h>
//declaring-structure
struct school {
    char t_name[20], incharge[20];
    int s_period, f_period, std;
    double m_num;
} s;

int main()
{
    //declaring variables
    char sub[20], sec[10];
    char eng[10]="english";
    char jun[10]="junior";
    int load, sub_num, tload;
    //clrscr();
    //taking input from user

    printf("\nEnter the teacher's name: ");
    scanf("%s",&s.t_name);
    printf("\nEnter the section (Junior, Primary, Senior): ");
    scanf("%s",&sec);
    printf("\nEnter the name of incharge: ");
    scanf("%s",&s.incharge);
    printf("\nTotal load in one week (hrs): ");
    scanf("%d",&load);
    re_s_period:
    printf("\nEnter the Substitute periods: ");
    scanf("%d",&s.s_period);

    if (s.s_period > 4) {
        printf("There cannot be more than 4 substitute periods.\n Please Enter Again!!\n");
        goto re_s_period;
    }

    printf("\nEnter the contact number of teacher: ");
    scanf("%lf",&s.m_num);

```

```

printf("\nEnter the class: ");
scanf("%d",&s.std);
printf("\nEnter the number of free periods: ");
scanf("%d",&s.f_period);
printf("\nEnter the subject type: ");
scanf("%s",&sub);
printf("\nEnter the number of subject periods: ");
scanf("%d",&sub_num);

```

```
//checking conditions
```

```

if (load > 36) {
    s.f_period+=2;
}
tload=(load*4)-(s.f_period*4);

```

```
//Output
```

```

printf("\n*****\n");
printf("          OUTPUT");
printf("\n*****\n");
printf("\n\nTOTALLOAD IN MONTH IS %d hrs\n",tload);
printf("\nTeacher's Name:\t %s\n",s.t_name);
printf("Contact Number:\t %.0lf\n",s.m_num);
printf("Class:\t %d\n",s.std);
printf("Subtitute Periods:\t %d\n",s.s_period);
printf("Load in a week in hrs:\t %d\n",load);
printf("Incharge's Name:\t %s\n",s.incharge);
printf("Section Taught:\t %s\n",sec);
printf("Number of extra free periods for next week:\t %d\n",s.f_period);
printf("Subject Type (Period):\t %s\n",sub);

```

```
//exception-handling
```

```

if(strcmp(sub,eng)==0 && sub_num>2) {
    printf("\n*****\n");
    printf("\nThere should not be more than two periods a week for a
single teacher.\n");
    printf("\n*****\n");
}
if(strcmp(sec,jun)==0) {
    printf("\n*****\n");
}

```



```
printf("\n%s is a junior teacher and he/she cannot teach senior
section\nbut he/she can be assigned substitute period in primary
section.\n",s.t_name);
printf("\n*****\n");
}
//getch();
return 0;
}
```

Output:

1.

```
Enter the teacher's name: arpita
Enter the section (Junior, Primary, Senior): primary
Enter the name of incharge: head
Total load in one week (hrs): 38
Enter the Substitute periods: 5
There cannot be more than 4 substitute periods.
Please Enter Again!!
Enter the Substitute periods: 3
Enter the contact number of teacher: 8989898654
Enter the class: 9
Enter the number of free periods: 2
Enter the subject type: maths
Enter the number of subject periods: 4
```

```
Enter the number of free periods: 2
Enter the subject type: maths
Enter the number of subject periods: 4
*****
                        OUTPUT
*****

TOTAL LOAD IN MONTH IS 136 hrs

Teacher's Name:  arpita
Contact Number:  8989898654
Class:    9
Subtitute Periods:      3
Load in a week in hrs:  38
Incharge's Name:       head
Section Taught:  primary
Number of extra free periods for next week:      4
Subject Type (Period):  maths
```

2.

```
Enter the teacher's name: priyal
Enter the section (Junior, Primary, Senior): junior
Enter the name of incharge: HOD
Total load in one week (hrs): 23
Enter the Substitute periods: 2
Enter the contact number of teacher: 9876567654
Enter the class: 12
Enter the number of free periods: 2
Enter the subject type: english
Enter the number of subject periods: 4
```

```
TOTAL LOAD IN MONTH IS 84 hrs

Teacher's Name: priyal
Contact Number: 9876567654
Class: 12
Subtitute Periods: 2
Load in a week in hrs: 23
Incharge's Name: HOD
Section Taught: junior
Number of extra free periods for next week: 2
Subject Type (Period): english

*****

There should not be more than two periods a week for a single teacher.

*****

*****

priyal is a junior teacher and he/she cannot teach senior section
but he/she can be assigned substitute period in primary section.

*****
```

Conclusion:

Our approach of developing timetable was proved successful. From this timetable management system, we are able to obtain useful information for future work. Further development includes expanding algorithm and flowchart, also improving problem modelling and search techniques.