TIMETABLE CREATOR
TO DEVELOP A SOFTWARE TO CREATE TIMETABLE FOR SCHOOL USING C++.

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INTRODUCTION

The teaching staff usually spends a lot of time in timetable generation and timetable management. Timetable generation is one of the pre-requisites in a school. The only way to reduce the burden of teachers in creating timetable is to make a program. This project aims to help in generating timetable for various classes in a school. The project, TIMETABLE CREATOR, is software to help in creating timetable schedule in schools. This project mainly focuses on including the important features needed to create a timetable in a school. The project takes in data required to create a basic timetable. The project records the data saved in the form of image files.

PROBLEM ANALYSIS

Creating timetables for various classes is a very tough job for the school authorities. Unless a software is used to create them it will be very time consuming. Design of an algorithm for timetable generator is never a perfect one as there can be more than one possible arrangement and there are so many details to be taken into account like preference of teachers, exam scheduling, etc.

This program creates timetable for classes in school. Being a basic model of timetable creator it takes in only fundamental data in creating them.

PROGRAM DESIGNING

The designing of this software needs extensive use of classes and functions so that so many complicated things can be simplified and can be processed in a much easier way. At first the program is designed into the following parts-

Acquiring data such as name of the school, number of periods, etc. from the user.

Entering data of a particular class in the school either by adding various subjects or by specifying particular periods in the week.

Storing of the data and modifying it as and when it is required.

Generating of the timetable and also an option to generate many such timetables.

Facility to save the timetable generated.

The scheduling was done in TURBO C v3.0 and the timetable was saved using a code in CODEBLOCKS.

In order to implement the above discussed issued, the following tools of C++ were used.

For the scheduling following classes, functions and data structures are:

CLASSES:

CLASS SCHOOL

It's data members are-

Data variables-

character type schname[40]

integer type days

integertype noperiweek

Member function-

voidsch_det(char s[],intm,int n)

> Function for entering in data like name of the school, number of periods in a day, number of working days.

intnoperiodsweek()

> Function for returning the number of periods in a week.

int workdays()

> Function for returning the number of working days in a week

char* scname()

Function for returning the name of the school.

CLASS DETAIL

The data members are:

Data variables-

integertype scode

integer type no

integer type chk

character type sub[50]

character type subsh[5]

character typetea[50]

character typeteash[5]

Members functions:

detail()

    Constructor which makes everything NULL and assigns a subject code for every object created which is a random value.

void enter(char,char,char,char,int,int,int)

    Functionwhich takes in data such as name of the subject and a shortname, name of the teacher and the initial and also the number of periods in a week.

char* subject()

    char* teacher()

    subcode()

    int periods()

    All these functions return shortnameas the subject, initial of the teacher, the subject code and the number of periods respectively.

FUNCTIONS USED:

    Void draw_tab(int&v1,int &v2)

    Function which draws the table using the data entered of the number of periods and number of work days.

    char* writ_gmode(int,int,int,int)

    This function provides users with the ability to punch in the data in the the graphic mode leaving aside the conventional non-graphic mode.

void allocate(detail per[],intsize,int rand=1)

      This function allocates the periods according to data entered

Void disp(detail per[],intsize,intchk)

      function which finally puts the timetable on the screen.

FUTURE ENHANCEMENTS

THIS PROGRAM INCLUDES MOST OF THE BASIC FEATURES. THERE ARE MANY IDEAS THAT CAN BE IMPROVED AND INCLUDED SUCH AS:

IMPROVED GRAPHICS.

MORE USER-FRIENDLY.

BETTER WAYS OF STORING THE DATA SAVED.

INCLUDE MORE FEATURES LIKE TEACHERS, COMBINED TIMETABLE FOR THE ENTIRE SCHOOL

BIBILOGRAPHY

COMPUTER SCIENCE WITH C++ - SUMITA ARORA

WWW.ASCTIMETABLES.COM

CODEBLOCKS MANUAL