

Productive Study Routine Generator



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Abstract Productivity plays a vital role in completing all the tasks on time. Likewise, being productive is really foremost thing for the students to ace the exams and reach their goal. Scheduling for exam preparation will help students to prepare and write the exam with tension free. So, we come up with an idea which will assist the students to making more earnest by introducing Automatic Productive Study Routine Generator with the help of Graph Colouring Technique. Graph colouring is an algorithm that can be applied in making a time table or a schedule. This Automatic Productive Study Routine Generator takes the period that user wants to complete the syllabus like number of weeks or months. The machine learning based generator schedule is automatically prepared as per the input.

Keywords Scheduling · Graph Colouring Technique · Automatic Productive Study Routine Generator (APSRG)

1 Introduction

A day consists of 24 h; productivity is being most efficient and creates lasting habits instead of following endless list of tasks. In other word, instead of working harder, work smarter. A study plan is an organized one that outlines studying schedules and learning objectives. College students, like those who work or go to school, should create a calendar that includes committed time. Each week for studying. Students might want to plan for their competitive exams which need a plan before weeks or months. Students might feel strenuous to sketch out their plan in organizing the subjects and accommodate their activities in 24 h that is a day. Routine planning is

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tedious job for students with respect to time and one's power [1, 2]. This system allows creating a study routine automatically. Our automatic time generator application will help to create time tables which saves the time and reduces the burden. This automatic generated study routine generator reduces the stumbling blocks or hurdles of manually preparing the planner. The main aim is here to develop a simple, easily understandable, productive and portable application which could automatically generate good quality productive study plan [3, 4].

As honourable Prime minister of India, Narendra Modi talked about the preciousness of time management for preparation of examinations for the students in Pariksha Pe Charcha, 2021 which is a part of movement 'Exam Warriors' led to create a stress free atmosphere for youngsters. A stress free atmosphere could be achieved by proper planning or scheduling for exams [5].

There exist a lot of diverse problems such as:

1. Unproductiveness
2. Less concentration
3. Procrastination
4. Less score in exams

This generator takes the period that user wants to complete the syllabus like number of weeks or months.

- Number of subject and the list of subjects.
- Collage or class timings.
- Study session duration per subject. As input

Then generates a schedule as per the input and also recommend the warm up exercises during breaks.

2 Methodology

Only one subject is allowed for a each time slot to get rid of conflict [6, 7]. This can be done with the graph colouring algorithm which will assign each colour to particular each node and makes sure that no 2 adjacent nodes are coloured the same. Given the list of courses DBMS, W.T, Python, DAA, and Operating Systems and 10 h per day to study. This is because single student cannot study more than a subject in a single time slot. The timeslots are shown in Fig. 1 for this illustration.

Here each node 1, 2, 3, 4, 5 are represents each subject such that no 2 time slots can occupy single subject in order to implement this graph coloring algorithm can be used with minimum chromaticity.

1. Colour assignment to the colliding subjects using graph colouring algorithm
2. Placing the courses to the table according to the colours assigned.

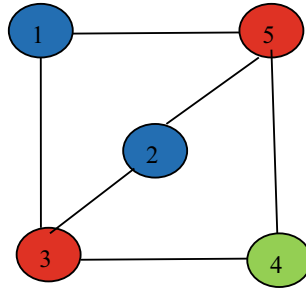


Fig. 1 Scenario of instance graph

The maximum critical section inside the observe is the era of the time table [8, 9]. Operations completed in this phase may be ordered as follows.

3 Results

The layout of the study routine generator is illustrated in Fig. 2:

Productive Study Routine Generator

Enter title name:

Enter number of subjects


Subject priority:

Number of hours per day to study

Wake up and sleeping time:

Other activities:

Fig. 2 Scenario of instance graph



TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
5:00 -5:30	Wake up and Fresh up	Wake up and Fresh up	Wake up and Fresh up	Wake up and Fresh up	Wake up and Fresh up	Wake up and Fresh up	-----
5:35 -6:30	Subject 1	Subject 2	Subject 3	Subject 4	Subject 5	Subject 6	Wake up and Fresh up
6:30-7:00	Revision	Revision	Revision	Revision	Revision	Revision	Read priority subject
7:00-7:30	Breakfast	Breakfast	Breakfast	Breakfast	Breakfast	Breakfast	Read priority subject
7:30-8:30	Subject 2	Subject 3	Subject 4	Subject 5	Subject 6	Subject 1	Breakfast
8:35-9:00	Revision	Revision	Revision	Revision	Revision	Revision	Revision
9:00-9:30	Exercises on topic	exercises on topic	exercises on topic	exercises on topic	exercises on topic	exercises on topic	exercises on topic
9:30 - 10:00	Free time	Free time	Free time	Free time	Free time	Free time	Free time

Fig. 3 Image generated by study routine generator

4 Output

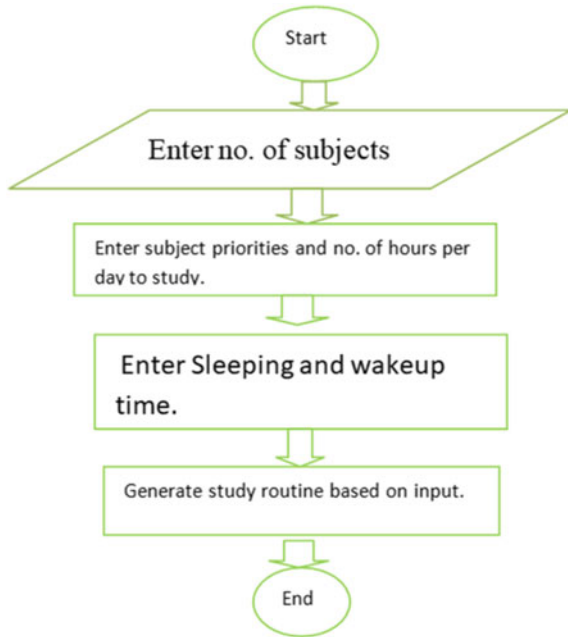
The resultant image generated from the study routine generator is shown in Fig. 3 below:

Taking subjects list from 1–6, their priorities, and their leisure hours as input this gen-erator generates a routine as in Fig 3. Here as the user enters the wake up, sleeping time and leisure time there will be a schedule generated by making sure that no two adjacent timeslots can have same subject. In case if user wishes to have a time block for other activities like breakfast, etc.

5 Analysis

As depicted in the Fig. 4, taking the input constraints such as number of subjects, number of hours per day to study etc., this generator generates a study routine that will help students to be more productive. More the productivity, more the diligent.

Fig. 4 Steps involved in the study routine generator



6 Conclusion

Students may want to prepare for their competitive exams which they plan before weeks or month. Students may find it difficult to organize their topics and schedule their activities in the 24 h that make up a day. So, our system helps students to make a productive study schedule which help students to ace the exams. And reach their goals. The future scope includes an application that can be implemented with added productive tools like To-Do list, Task Checker, Pomodoro timer etc., where user can have multiple productive applications in a single domain and make them more productive.

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