

# Faculty Rating System For Fully Flexible Credit System

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**Abstract.** *Institutions following a Fully Flexible Credit System (FFCS) give students complete freedom in choosing their preferred faculty. But most students struggle in deciding which faculty to choose for a particular course. Usually students approach the senior students for suggestions. This happens every semester and deciding the faculty is a hectic period for the students as they have to reach out to different people and hear different feedbacks of each faculty and finally determine whom to choose based on the suggestions. There is already enough work and pressure for students so this project is here to help students choose faculty based on senior's and other student's ratings. The website will contain profiles of every faculty in the institution and the respective ratings and feedbacks from students. Students of the institution can legitimately rate and give feedbacks for the faculties based on their experience with the latter.*

**Keywords:** FFCS, Rating System

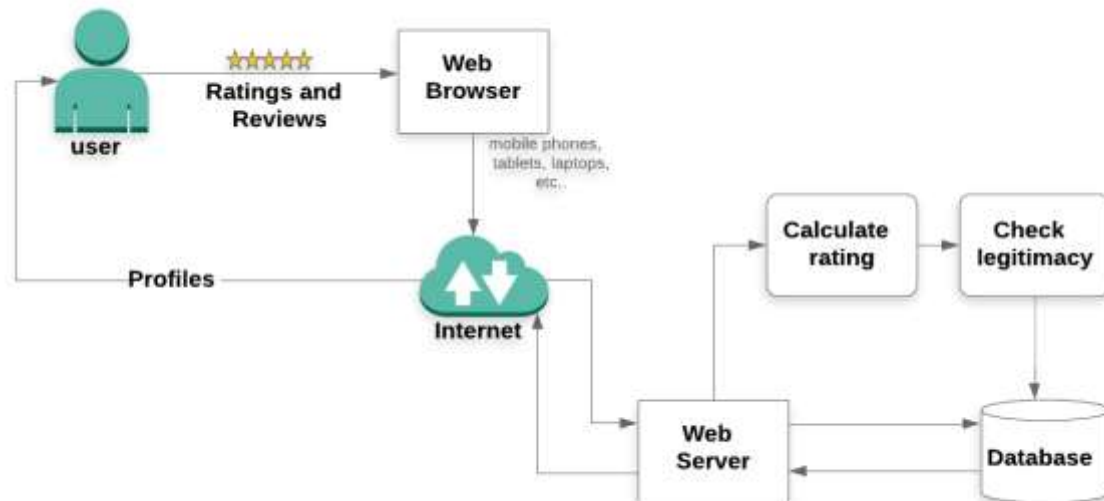
## 1. INTRODUCTION

Fully Flexible Credit System creates a student-friendly learning environment where students have complete freedom in choosing their courses. In this system, students can select their preferred timetable slots and faculties. This way students can schedule their classes and various activities of interest with ease[1]. Students can now do the academic planning according to their pace. FFCS not only offers a choice for students to build their curriculum, but also improves their skill in planning. The proctor may help the student in identifying the courses to be studied in each semester based on program requirement, course prerequisites, student's academic ability and interest in various disciplines, past academic history, proposed course offerings and other related criteria. This system is very useful for students who would like to choose the same time table slots and faculties as their friends and students who want to choose according to their bus timings.

## 2. MOTIVATION

Students do extensive research about the faculty they will choose during FFCS registration. Mostly they ask their seniors and figure out which faculty is best for them. This work is time-consuming. Asking each and every senior is not practical and takes a lot of time[2]. Even if it is possible, not all the students have senior friends and even if they do the number is still less. Asking three to four people is not ideal when making a decision as different people may have

Fig. 1. Service Model



different opinions about a faculty. Faculties teaching methods change for different courses. There should be ratings and reviews for the different courses a faculty may teach giving students a better picture in choosing the faculty. The overall goal is to create a go to application for students to choose their faculty with ease and get a chance to help other students by rating faculties legitimately in the website.

### 3. BACKGROUND: RATING SYSTEMS

In this section, the rating systems and algorithms are discussed.

#### 3.1 Rating systems

There are various rating systems used in various domains, namely the star-based rating system, point-based rating system, percentage-based rating system and thumbs-based rating systems[3]. The purpose of the rating system in this project is to aid in decision-making. Star rating systems can help users make complex decisions. Star rating systems are often accompanied by more other user reviews and information about the rating object. This makes the decision-making process easier for students because it gives them a three-dimensional overview of the object. User start rating, detailed description and user reviews constitute the three-dimensional overview of a faculty.

#### 3.2 Service Model

The user can access the website using any device that has a web browser. Faculty profiles can be found using various algorithms. Students can view ratings and review of faculties in their profiles[4][5]. They can also rate and submit reviews of the faculty. The ratings and reviews are sent to the web server where the new weighted average rating is calculated. The percentage of each number of stars for each course is calculated and stored in the database. The server can access the database to show information to the user or student. Rating and review submission are only done by students. Thus, students are given credentials for this purpose. Users without credentials cannot rate or submit reviews. The model is illustrated in Fig.1.

## **4. MODULES**

### *4.1 User Module*

All users can access information of the faculties in the institution. The information comprises of the ratings and reviews for various courses the faculty may teach and a bar graph of the average CPGA procured by the students in the past semesters. Searching faculties can be using course code, faculty name or department, this gives the user/student ease of access. Rating and feedback submission require authentication. Students of the institution are given predefined credentials; this maintains a system where only students of the institution can rate a faculty and not any user who visits the website. Students can start rating after logging in. The ratings process involves a series of questions which discusses the traits of the faculty. The ratings a 5-star based. Feedback is submitted after typing in a text box. The rating as well as feedback requires choosing the respective course. Users can also sort faculties according to their ratings. The number of feedbacks a student can give is limited to one, so if the student submits another feedback the old feedback gets overwritten by the new one. The same system implies to ratings as well. Students after logging in are given a feature where they can create a preference chart of any course or semester. Students can add courses and save the first four preferable faculties for that course for reference during course registration. If the student wants to have an offline chart, they can download the chart in form a excel sheet.

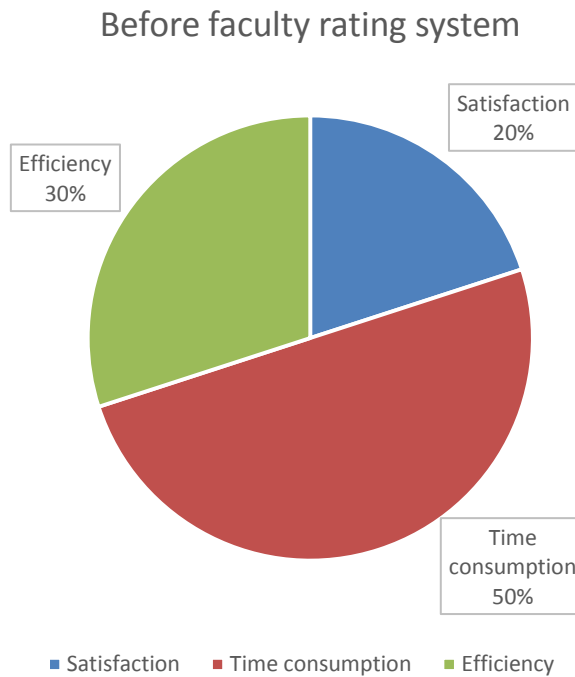
### *4.2 Administrator Module*

The administrator has access to all the information that goes in and out of the website. Hidden data like which student has rated which faculty with how many stars or feedbacks can be seen or manipulated by the administrator. The administrator should manipulate this data only if there is any abusive response. The administrator creates the credentials for all the students so that they can login and rate the faculties. Students who use the website abusively can be removed by the administrator. The administrator collects the previous semester's results of a faculty's class and send the information in JSON format to Chart.js in the frontend. The administrator maintains the faculty database. MongoDB is used for the faculty database and SQL is used for the student's credentials.

POST requests are used for saving the ratings and reviews to the database. JSON data about the faculty is decoded into bar graphs and progress bars.

## **5. RESULT ANALYSIS AND STUDY**

The rating system for fully flexible credit system has been test successfully and the following results have been obtained. Every fresher has this question about how will he/she know which faculty to choose.



The above graph depicts the various attributes in choosing a faculty during FFCS registration for a student. Time consumption dominates the pie chart because students have to decide which faculty to choose by asking seniors and other students. They have to ask many people and arrive at a conclusion. This makes it time consuming and inefficient. Sometimes students may ask only few people for suggestion and won't get a faculty of their preference which leads to less satisfaction.

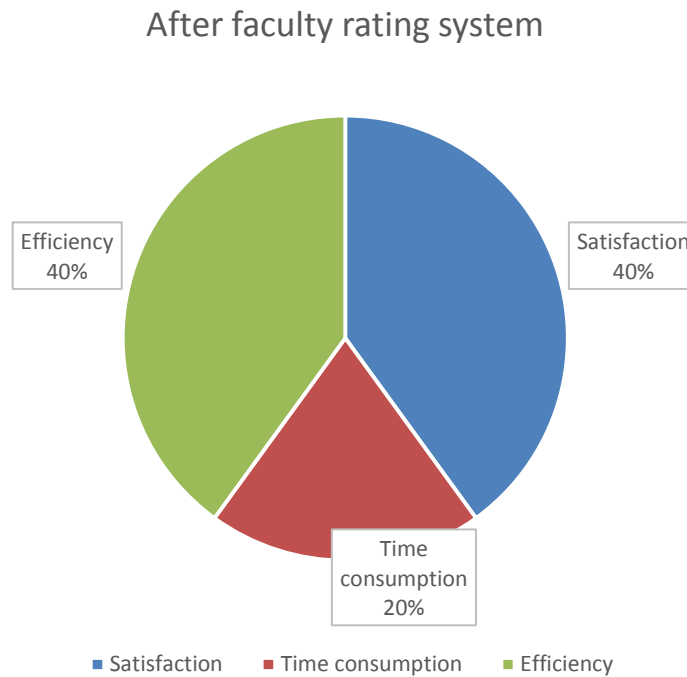


Fig. 2. Proposed Model

After introducing the faculty rating system, the time consumption is reduced drastically since students don't have to go to different people for suggestion one by one, all they have to do is visit the website. The time is reduced and decisions can be made faster with the 5-star based rating system and feedbacks given by other students. Thus, the efficiency is increased. If the students make the right decision with the available ratings and faculty data, the chances of getting satisfied with the faculty they chose will be higher.

## 6. CONCLUSION AND FUTURE WORK

Rating systems play a vital role in every aspect of our lives. People look for movie, hotel, products, basically for anything they want to buy, use or go to. Faculties or teachers are very crucial in education and academics for a student. Every faculty have different characteristics that make them the favorite for students. Fully flexible credit systems help students choose a faculty but this rating systems helps students to decide which faculty to choose. Future works for website may include checking whether the student who is a rating a faculty has been in that faculty's class in the past. Machine learning can be used to determine which faculty can be suitable for a student with certain requirements.

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