IGNITE

NAME **Tracy Lee**

YEAR **Freshman**

BACKGROUND

- Computer Science Major at RPI
- Looking for Summer Internship
- Favorite Study Method is Back Exams

WHY HE LIKES BACK EXAMS

1 Straight forward and prepares her well for the exams

2 Gauges how the questions on an exam looks like

3 Scores higher on exams

Background

Tracy is a freshman Computer Science major at Rensselaer Polytechnic Institute. She is an introverted student, and since this is still the first semester, she hasn't met a lot of people yet. She is currently taking Computer Science 1010, and it is midterm season. She didn't get an ideal grade on her previous exam because she didn't know how to study for a CS exam, so she knows that she needs to study harder to boost her score with Exam 2.

Problem

Tracy doesn't have many people that she could ask for help from, and the professor only provided one practice exam. After completing the entire practice exam, she still doesn't feel confident enough to get a high score on the exam. She has already read through all the lecture notes, but for CS, the only way to fully understand the material is to practice more. She is looking for more study material, but she doesn't know where to find it, and if there were any in the first place.

Solution

After taking the exam, Tracy realized that the problem is that there is little promotion or talk from the school about study materials, or how to study. When she was looking for more study material, she didn't know how to ask to get back exams from, or if they even existed on campus.

The goal with our project Ignite, is to make sure that it is properly promoted to all students. Although we have the APO office which offers some back exams, many people don't find out about their service until later. Tracy would love if there was one simple place where she can find all the study materials online, so she doesn't have to spend time worrying about who to ask or where to find back exams.

IGNITE

NAME **Alex Johnson**

YEAR **Sophomore**

BACKGROUND

🏫 Information Technology & Web Science Major at RPI

🤝 Is Looking for Work Experience

📖 Study Method: doing practice exam questions

WHY HE LIKES BACK EXAMS

1 Helps him visualize test day

2 He needs more practice

3 Gets better scores after doing practice questions

Background

Alex is a sophomore Information Technology & Web Science major at Rensselaer Polytechnic Institute. He is currently taking Intro to Biology as an elective, but he is slowly starting to realize that this topic is not his thing. His preferred way of studying for these exams is to do a bunch of back exams until he gets used to the questions being asked.

Problem

Alex is wondering how he can better study for his biology exams. His professor didn't give any practice exams or any type of study material, but he remembered that the APO office offers back exams. He went to the APO office, and looked for an Exam 2, but since biology is not a big class in RPI, there was only one back exam for this class. He feels that one back exam is not enough and couldn't think of another place on campus that offers review for this class. He knows that if he had more practice for this exam, he would've scored significantly better than he did on that exam

Solution

For some of the less popular classes that Alex takes at RPI, there is little to no study materials provided for that class. This is expected, because since RPI is a technical school, people don't pay as much attention to the science classes. After finishing his exam, he wants to submit his exam to the APO, but is not sure how to do that.

Through our project Ignite, students can upload their exams through the app or website with little effort. As students start to upload more exams, it would make more students inclined to upload theirs as well. Eventually the website would have an abundance of exams for all topics that students can study from.

IGNITE

NAME **Jeremiah Richardson**

BACKGROUND

- MechE Major at RPI
- Is Looking for Work Experience
- Favorite Study Method is Back Exams

WHY HE LIKES BACK EXAMS

1 Helps him visualize test day

2 The problems are the real deal

3 He can gauge how prepared he is

Background

Jeremiah is a senior Mechanical Engineer major at the Rensselaer Polytechnic Institute, a notoriously difficult major at a notoriously difficult school. His study method of choice is back exams, which he can never get enough of. There are new tests every year, but always the same few and outdated back exams. If only there was a place where students could post back exams they find, so that he would have more resources to study from.

Problem

Jeremiah has an exam on Load Distribution Systems, but the professor never handed out a practice exam or a previous back exam, even though the class is taught every semester. Its the first exam of the year, and Jeremiah doesn't know what the format of the test is nor how the points will be distributed.

Jeremiah asks around on discords from earlier classes, trying to find someone who had saved their exam. He spends a lot of his precious time searching for people and chatrooms until he finally finds it. An exam from a few years ago when the professor was still teaching. Over time, more people respond to Jeremiah and more back exams show up.

Solution

Jeremiah wonders why he had to go through so much effort to find past exams, when they existed and were useful reference materials to study from. Jeremiah thinks that having to do so much social engineering to find these back exams is silly. People are willing to share them, they just needed to be asked. The problem was finding all of these people in the first place, then getting the exams.

Jeremiah imagines a better world where he didn't have to sift the internet to find these exams. Instead, he could access a collection of them online in some friendly way, like through a website. He would be able to maximize his time studying by no longer searching around for back exams.

Background

Dr. Katie Snell is a lecturer at the Rensselaer Polytechnic Institute. She is in her 3rd year of teaching, and does it in tandem with an external job. She sees her students, multi-taskers who are doing many things at once, and emphasizes with their lack of free time. Her job at Big Chip Manufacturer Global is all about optimization. Really, her whole life feels like she's trying to find the fastest solution to a given problem.

Problem

Dr. Snell wants her students to be ready for their upcoming midterm. She has posted lecture notes and the topics for exams, but historically the first half of Calc III gives students trouble. She would do review sessions, but she doesn't have the time for them and knows it only benefits students who don't have an existing commitment during that time.

What resource can she give her students so they can feel ready for this exam?

Solution

Dr. Snell collects her exams from the past 2 years for this midterm, and after mixing around the order of some questions and changing values, she posts them to ignite.com, RPI's back exam repository. She tells her students to go to this resource, that it has several practice exams to practice off of, and that studying off of them will help prepare them for the midterm. Anyone who has questions is to find her during office hours.

Dr. Snell has now handled the problem while only devoting about an hour to copy pasting problems around and changing some numbers. She didn't incur any significant time overhead, and now the students will feel ready for their exam. She'll probably reuse about 40% of the back exam content, and make 60% new content, like she always does, but with different numbers, so she doesn't incur any significant time debt.

NAME **Dr. Snell**

BACKGROUND

🏫 Teaches Calc III and Number Theory

🌐 Also Works as a Technical Consultant to a Chip Manufacturing Company

📖 Masters in Mathematics, Bachelors in Computer Systems Engineering

WHY SHE LIKES BACK EXAMS

1 Students are more confident on test day

2 It saves so much time for her busy schedule

3 Students who struggle with back exams come to office hours