Grad Tool

Group D

Prezi

Admit to NCSU. What NEXT?

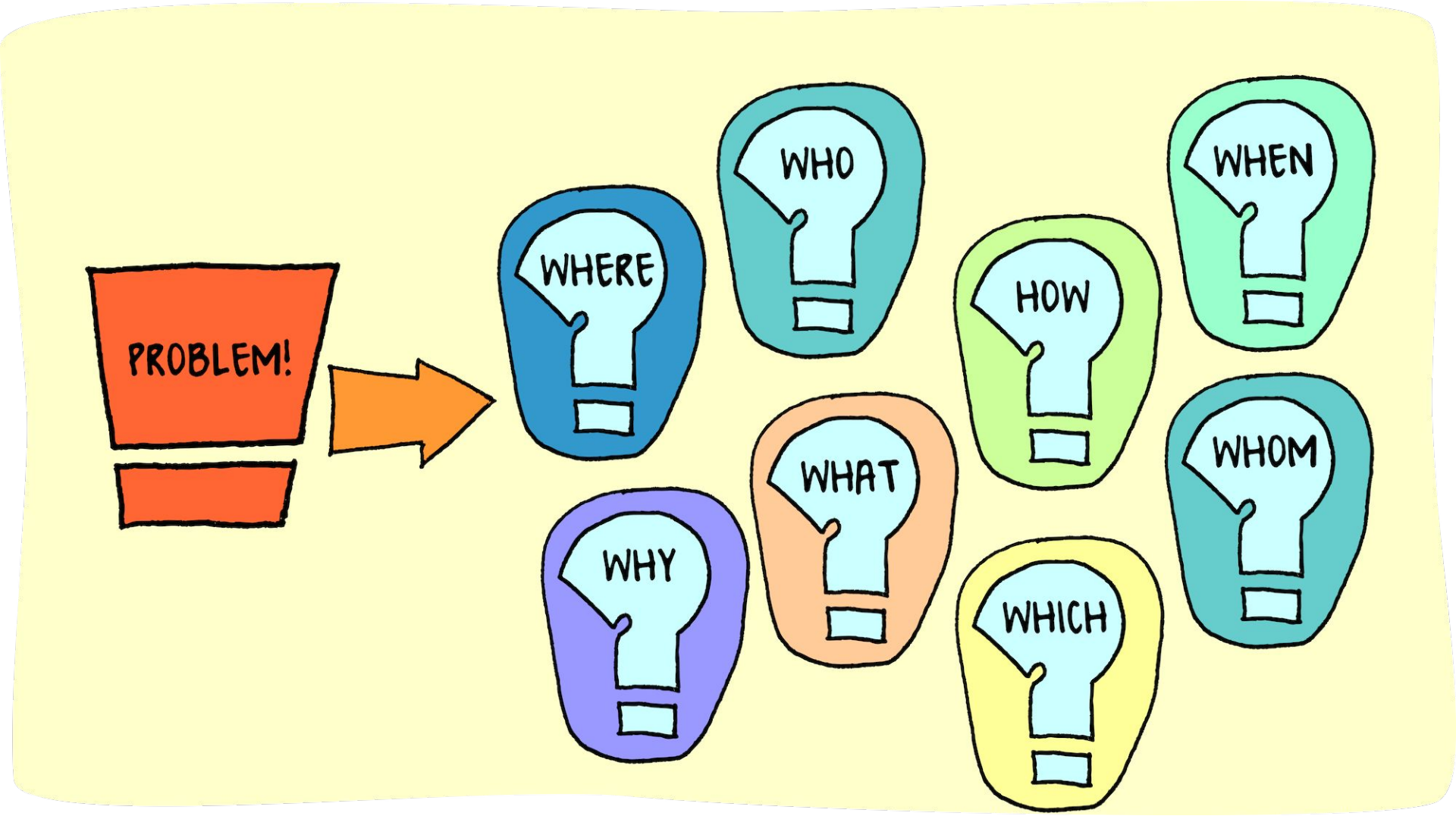
Pick subjects, look through requirements and stick to those plan!

And you do all that using:

mypack portal!

Result:

Project Beginning

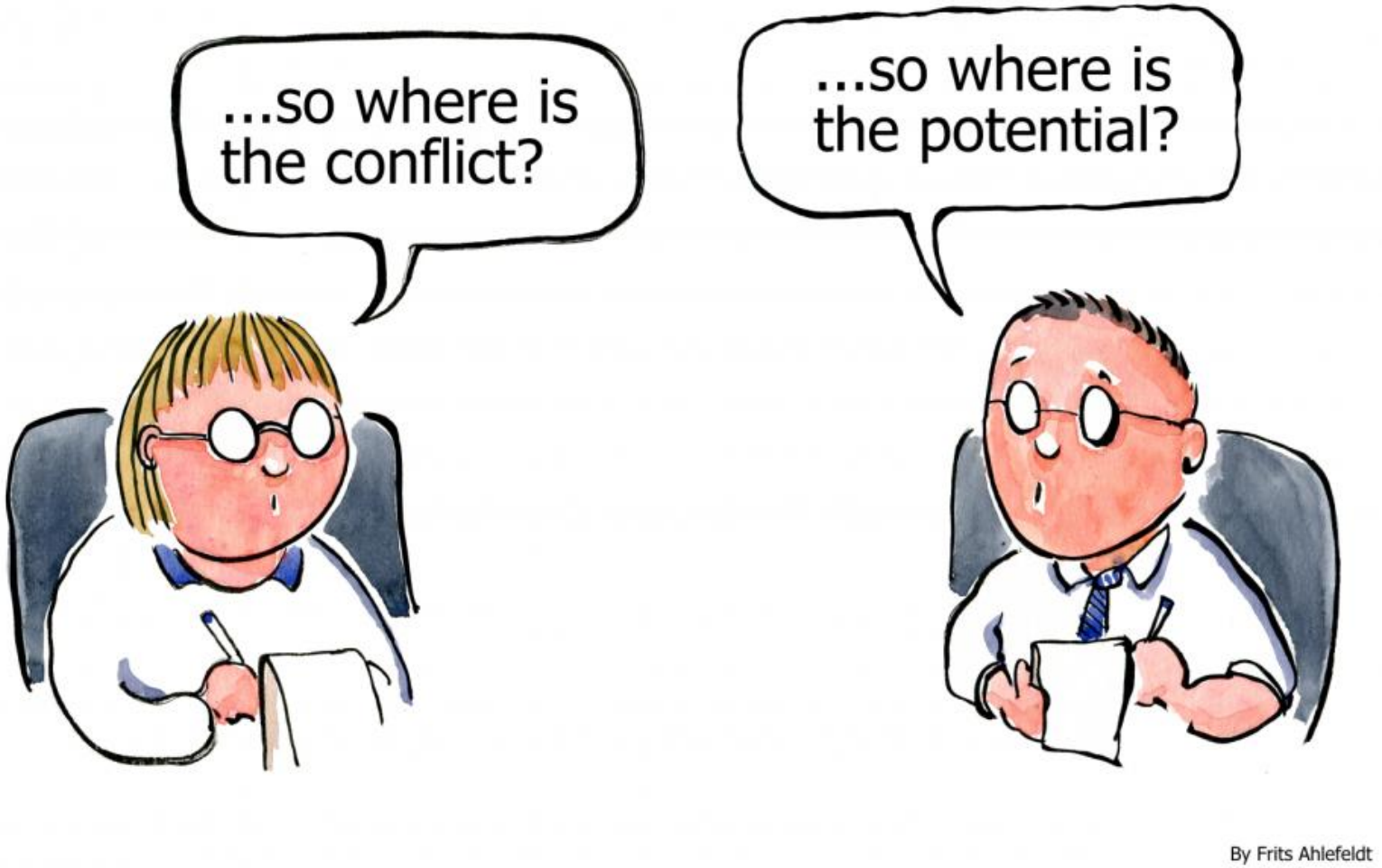


How we came up with the problem?

- well we faced it.
- we asked you, i.e. passed out surveys and studied if there was really a problem.

General Problems

- scattered graduate program track requirements
- scattered graduation requirements
- seminar details, requirements


...so where is the conflict?
...so where is the potential?
By Frits Ahlefeldt

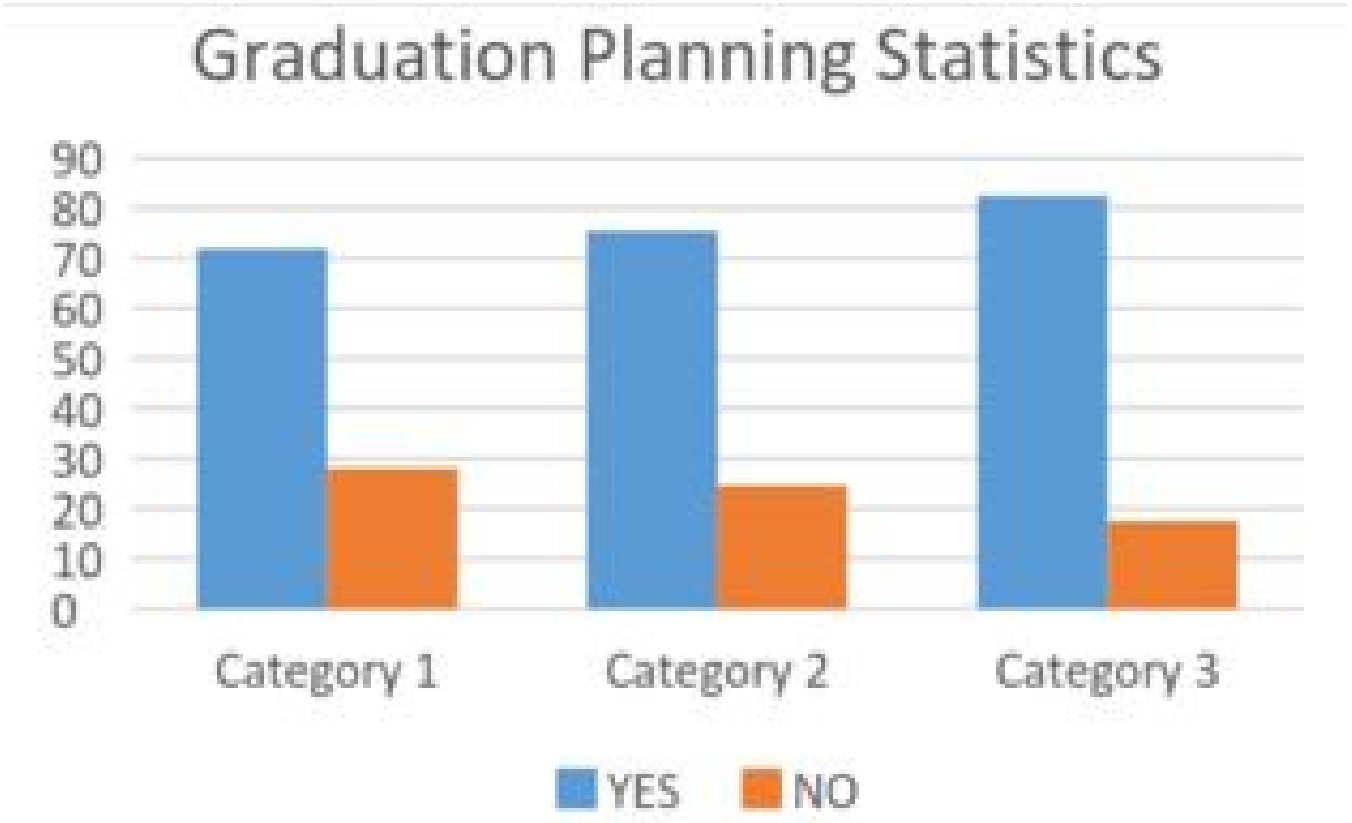
SURVEY
STATISTICS
PURPOSE
POPULATION

Survey Participants

Total 51 students:

- 21 pursuing their Bachelor's degree
- 27 pursuing master's degree
- 3 PhD students

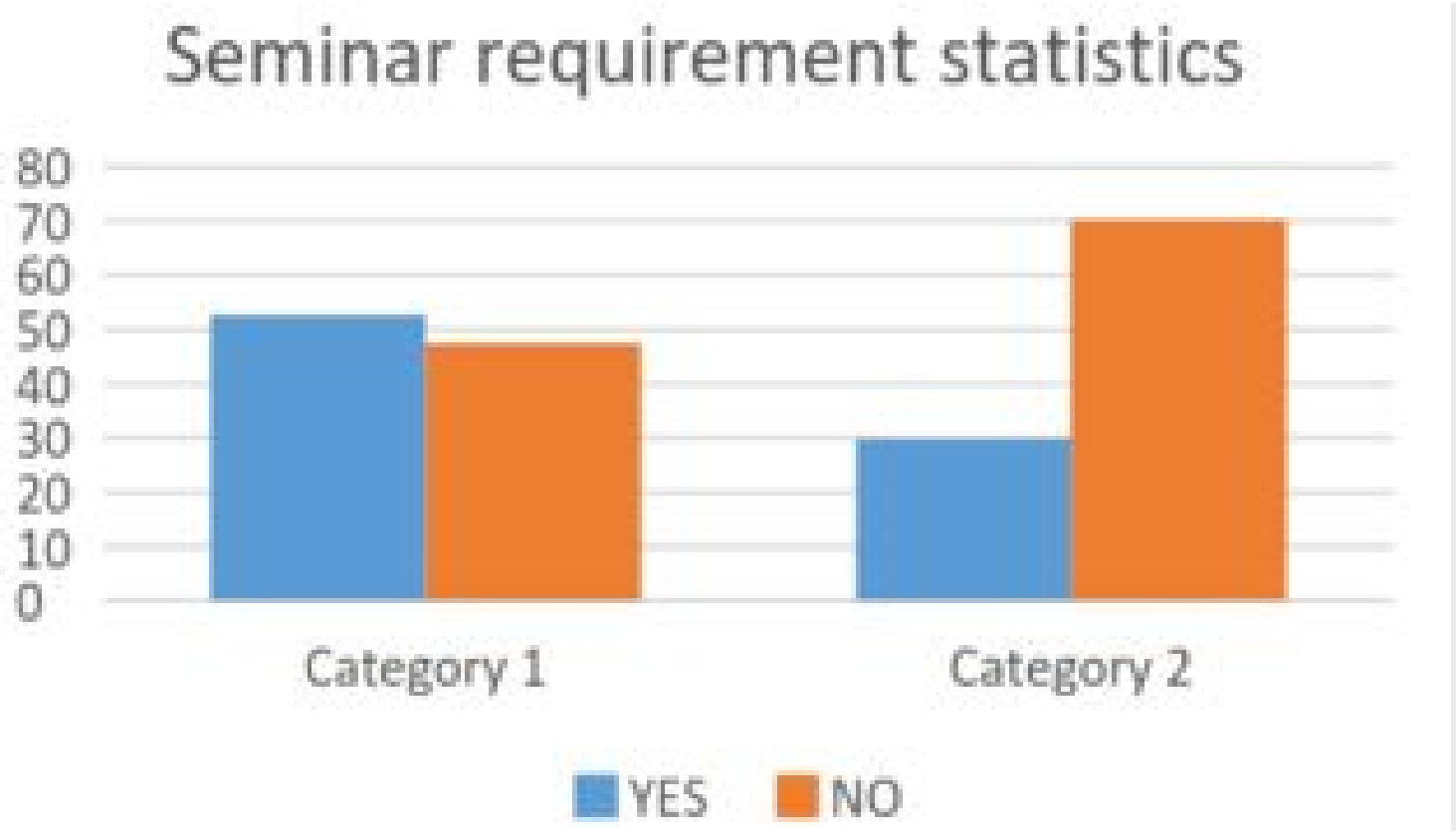
The study was not limited to Computer Science students



Category 1: Do you plan the courses for each semester well in advance?

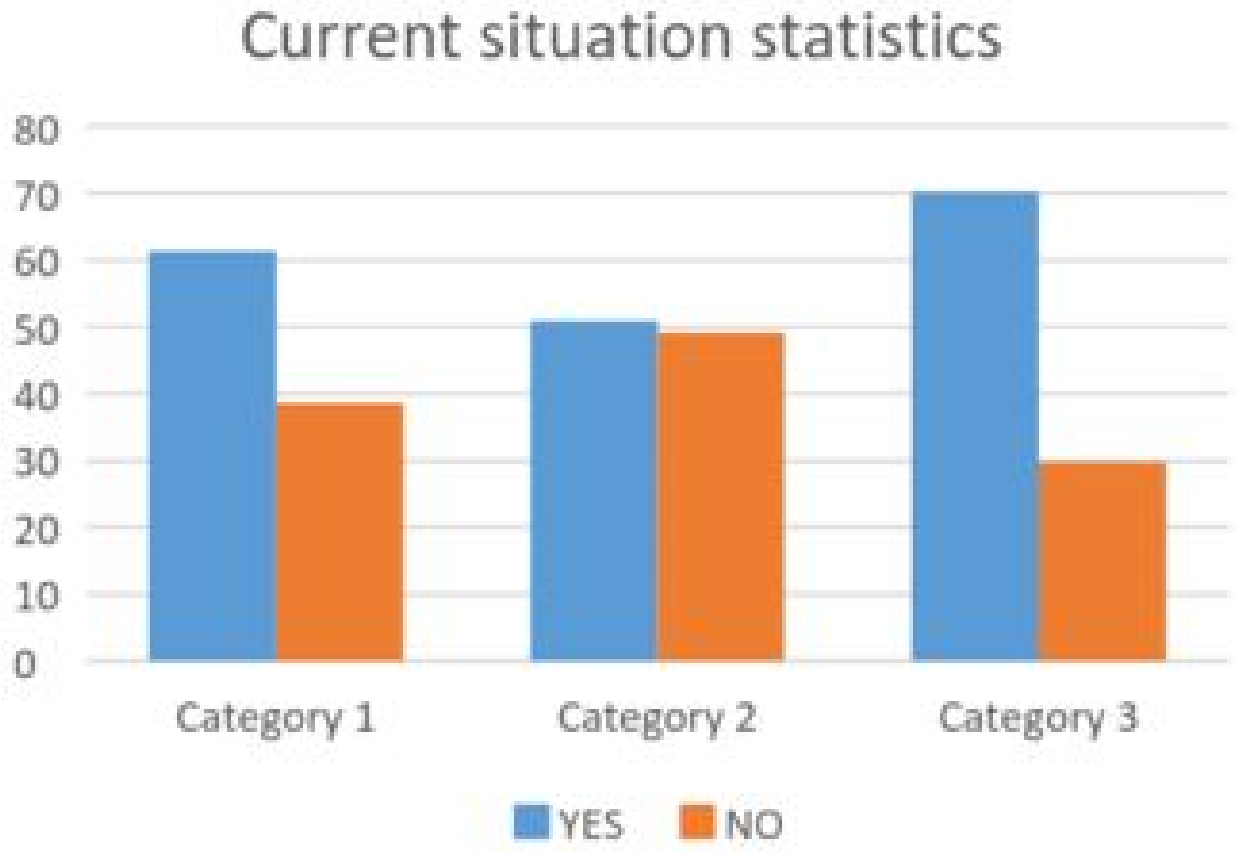
Category 2: Are you aware what courses are offered in which semester?

Category 3: Do you consider prerequisites for specific courses and plan your courses accordingly?



Category 1: Are you aware of the seminar attendance requirement of your degree?

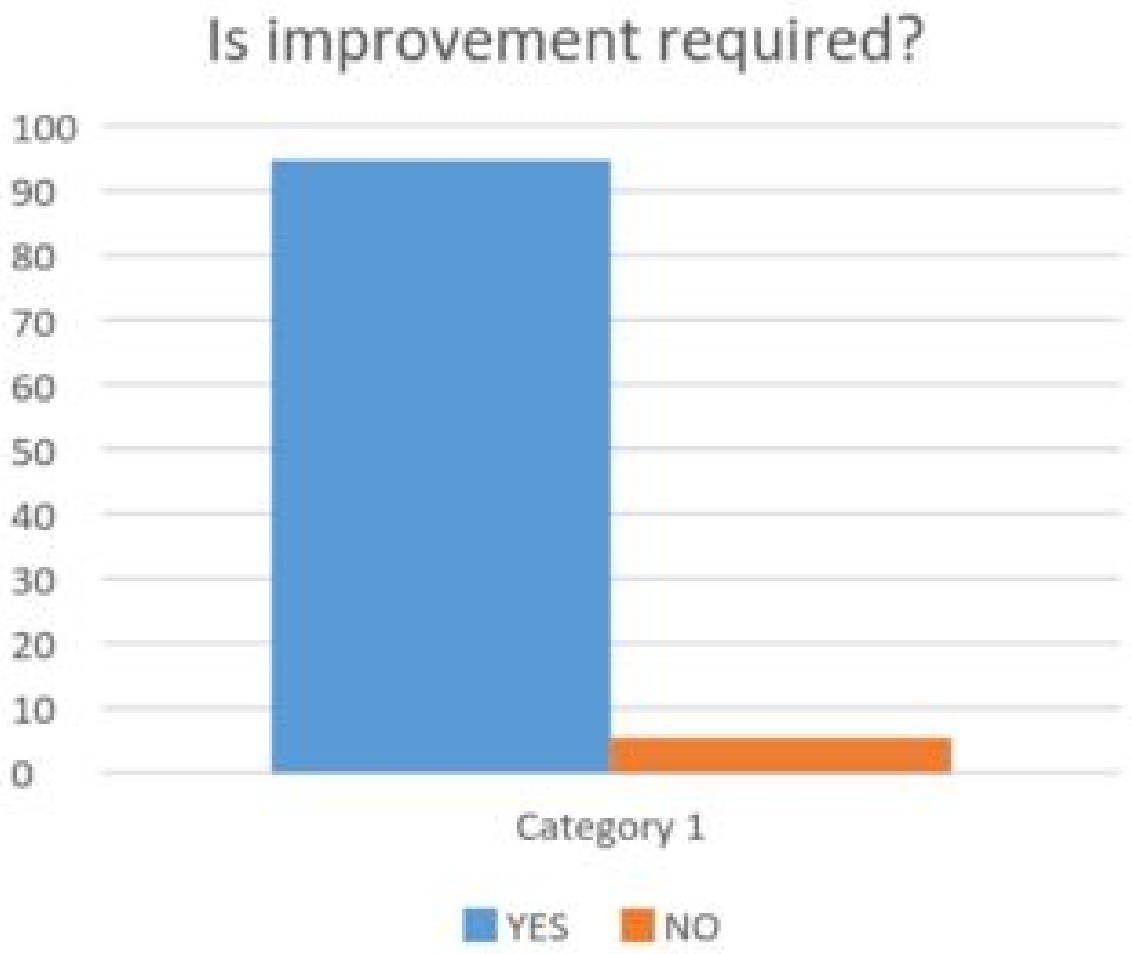
Category 2: Do you know where to find information about the seminars you have attended?



Category 1: Is it easy to find the information about all the graduation requirements mentioned above easily?

Category 2: Is it easy to keep track of all these requirements?

Category 3: Is all the information available at a single place?



Category 1: Will it be useful to have a tool that helps you plan your entire graduate program and enforce and reminds you about the different requirements to be met?

Approach

Solution1: Grad Planner Lite

Solution2: Graduation Tracker Tool

Solution3: GradPortal (Enhancing the existing tool)

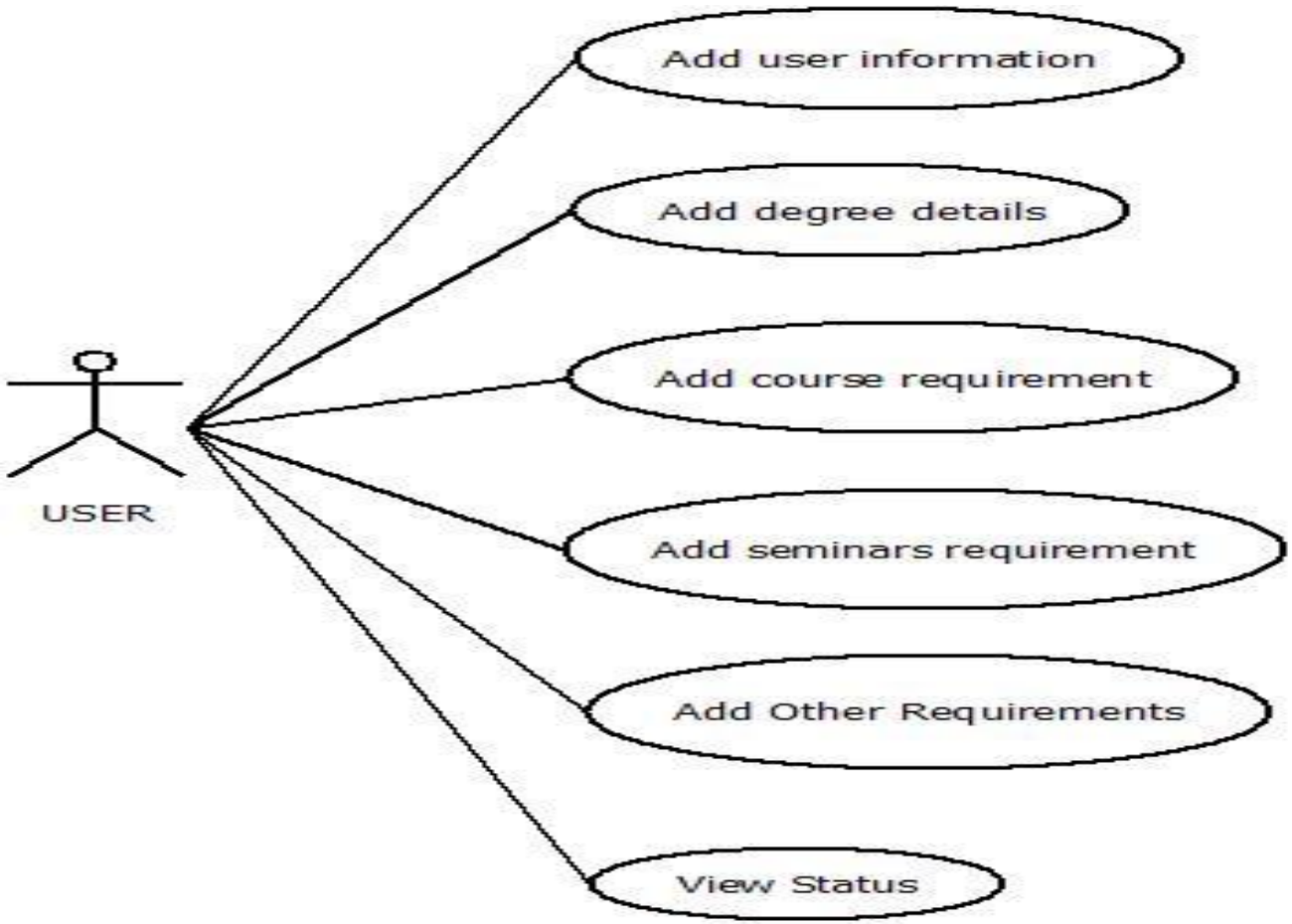
Solution1 - Grad Planner Lite

- Android Application

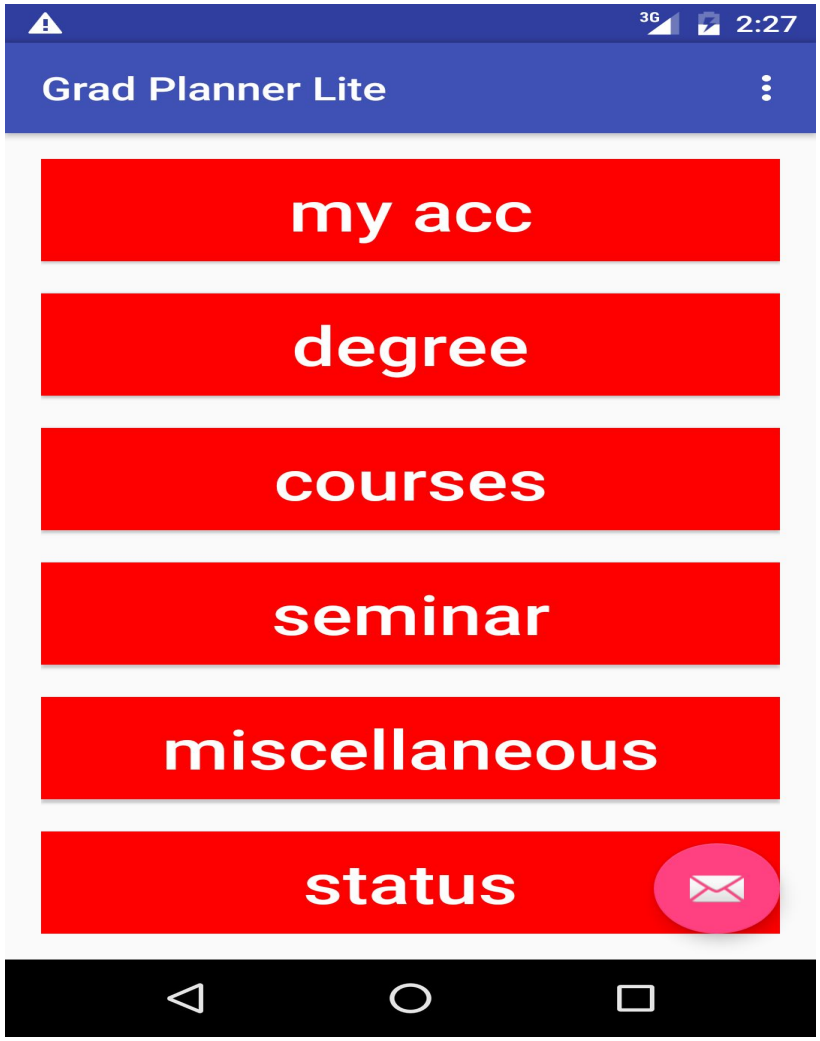
"As you can see, your wife left a few messages reminding you to check your blood sugar."

- Analogous to a TODO list or a Kanban Board

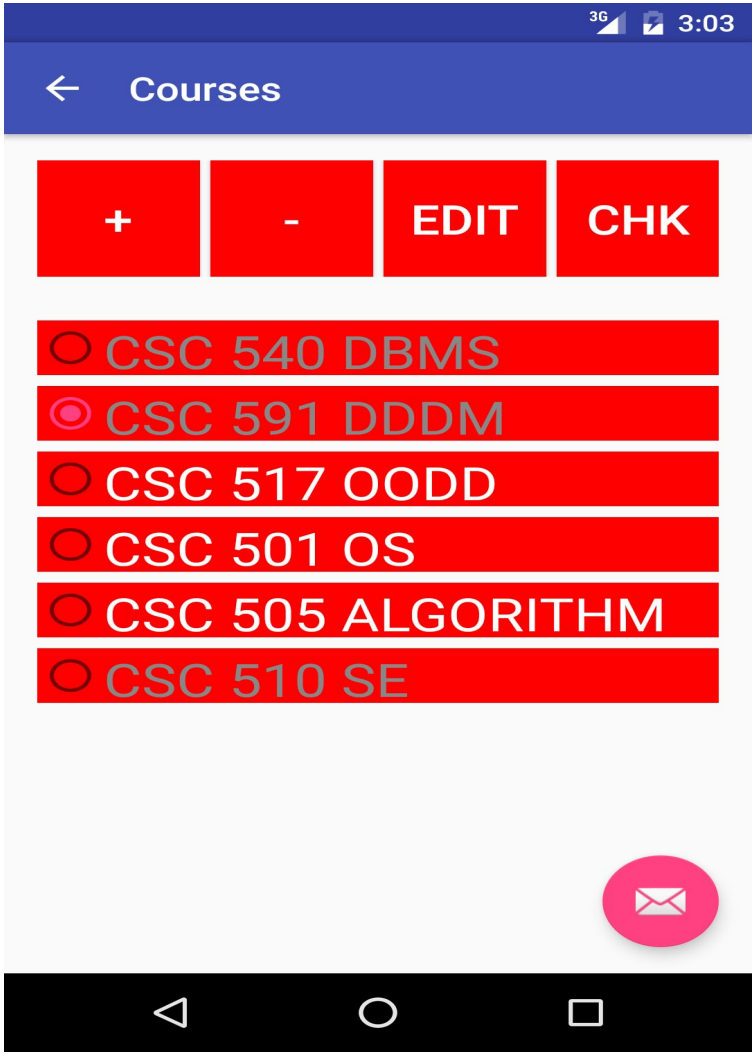
Use case diagram

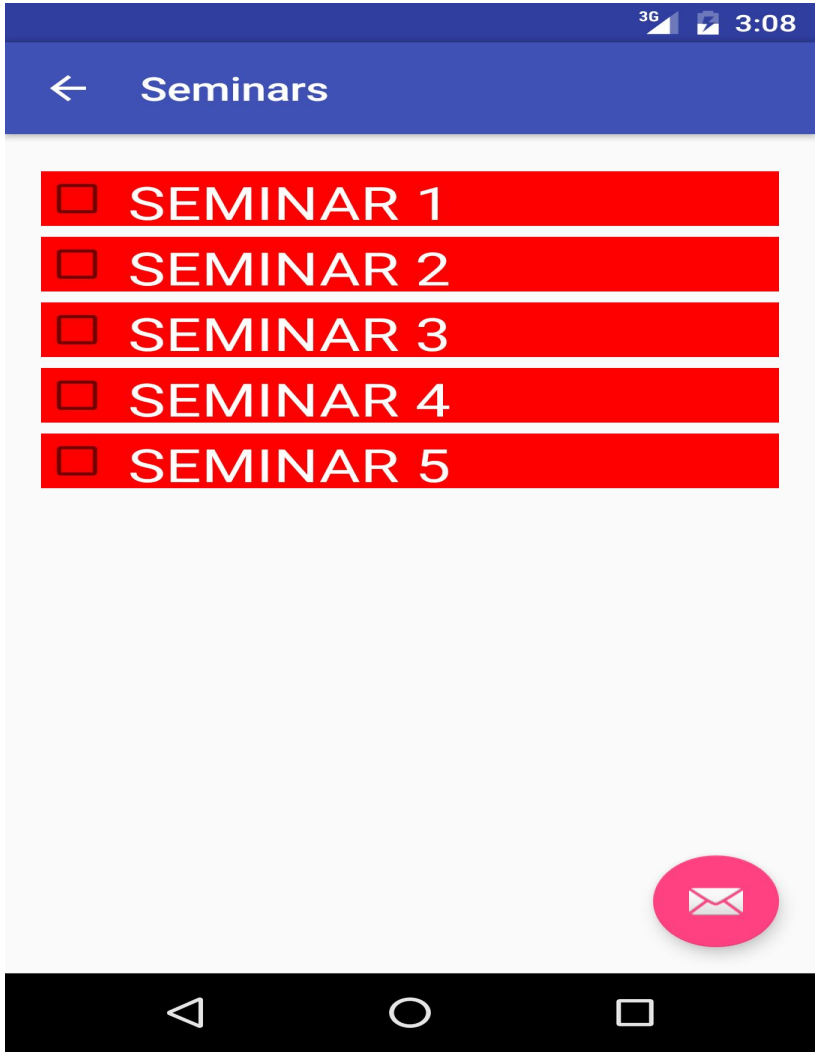


Grad Planner Lite apk

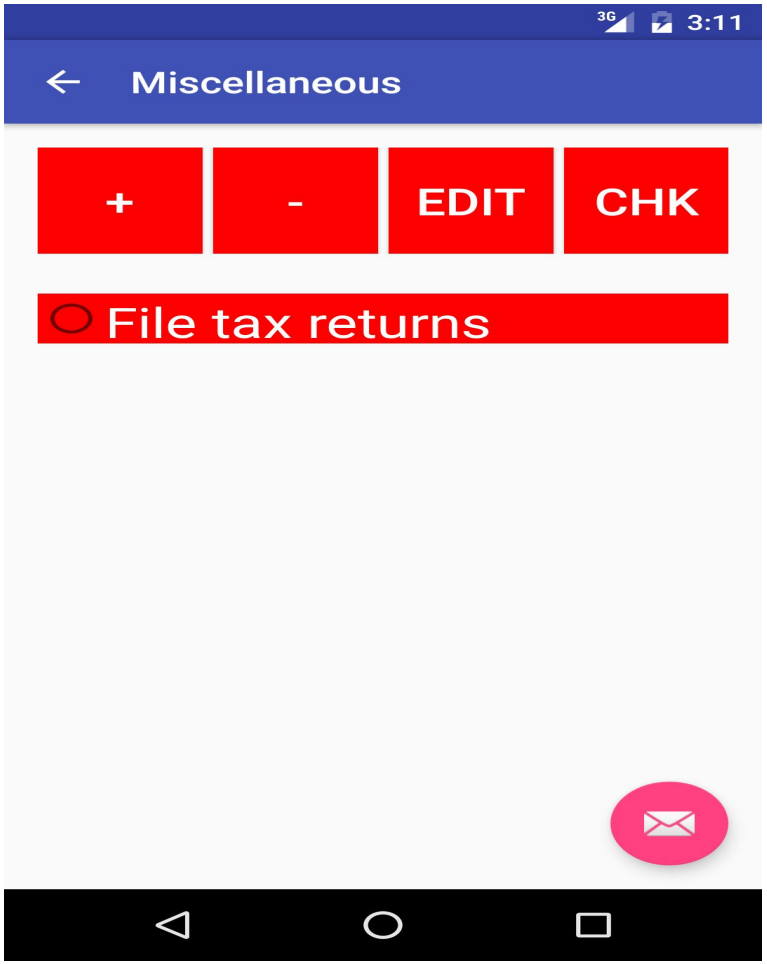


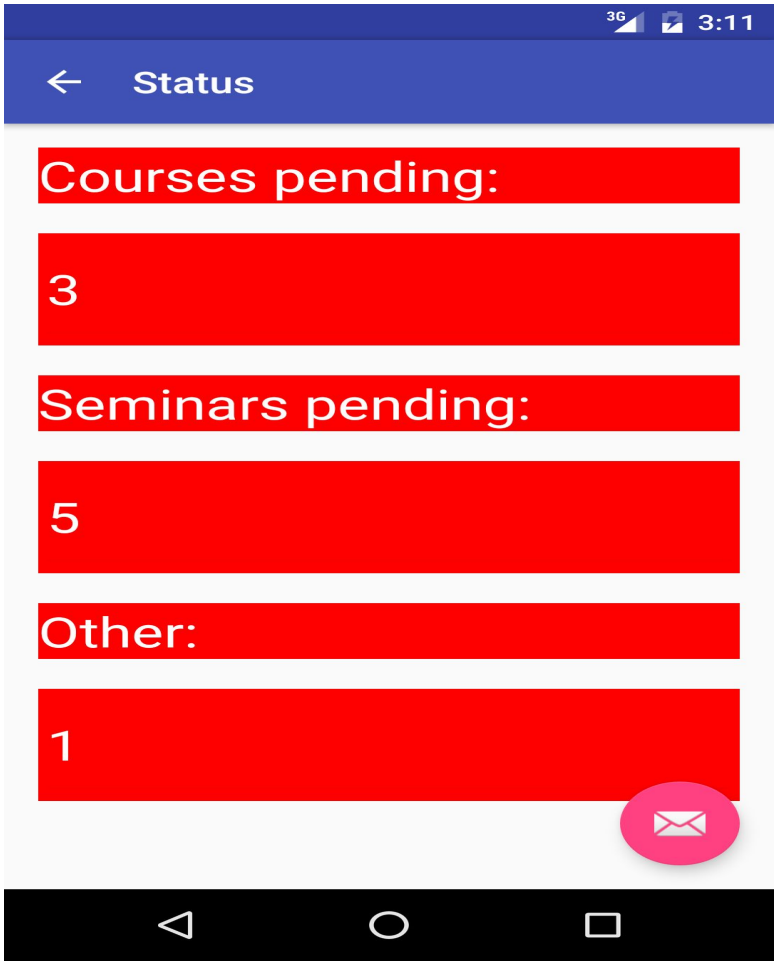
Courses and Seminars





Other requirements & Status





Advantages:

- Simple
- Easy to use
- Offline

Disadvantages:

- Require initial effort at the user's end
- Only Android devices are supported right now

Future Enhancements

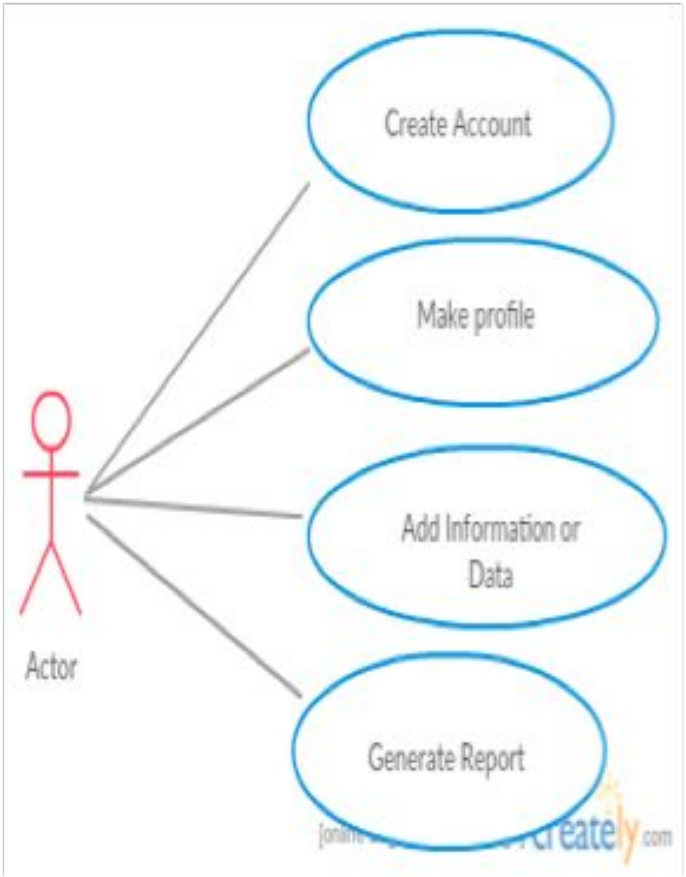
- Reduce user's effort
- Support more platforms

Solution 2: Graduation Tracker Tool

- Seamless and comprehensive desktop tool that can help user to keep track of the progress made towards the goal of graduation…

- Can be distributed as exe for windows users or dmg file for mac
- The application maintain its database
- Database can be updated online or through updates and pathches
- User profile and information is maintained

Use Case Diagram…

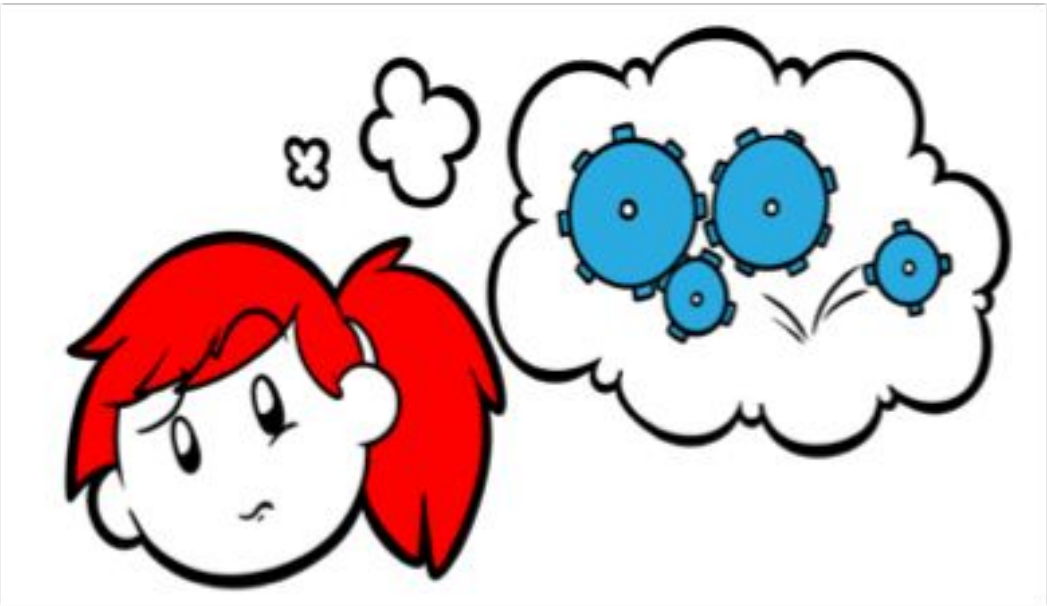


- User creates account and updates the information…
- Reports are generated to guide user about the progress made…

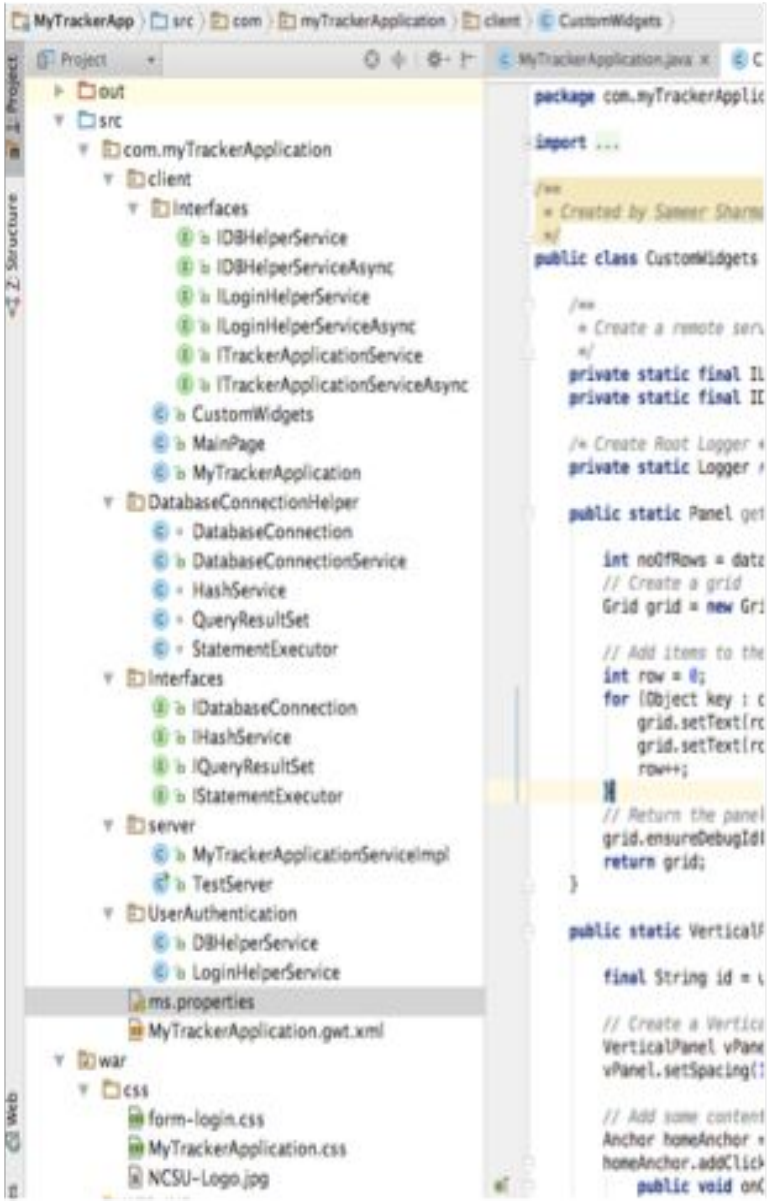
Architecture

- Proper segregation between client, logic and data layer
- Client – Javascript, html and css
- Logic – Controllers in Java
- Data – MySQL Database with defined interface functions
- Classic MVC…
- Flexible and robust enough for future enhancements

Technical Details



- Change of plans to a straightforward simpler way…
- GWT – Google Web development toolkit
- Runs on local Jetty or tomcat server
- Uses MySQL database
- Refactor or reuses our DBMS project module from last semester

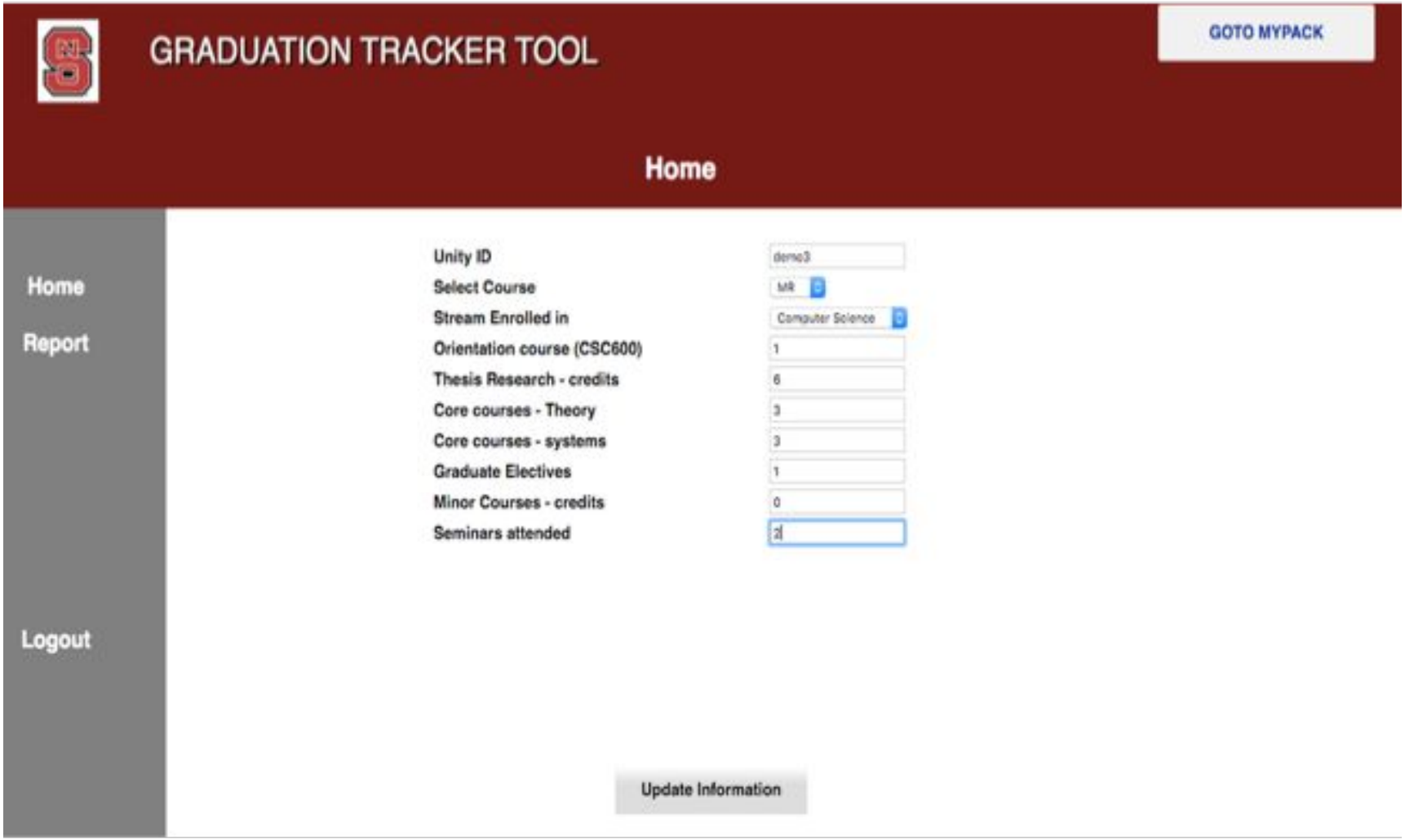


- The folder structure and segregation of different layers...

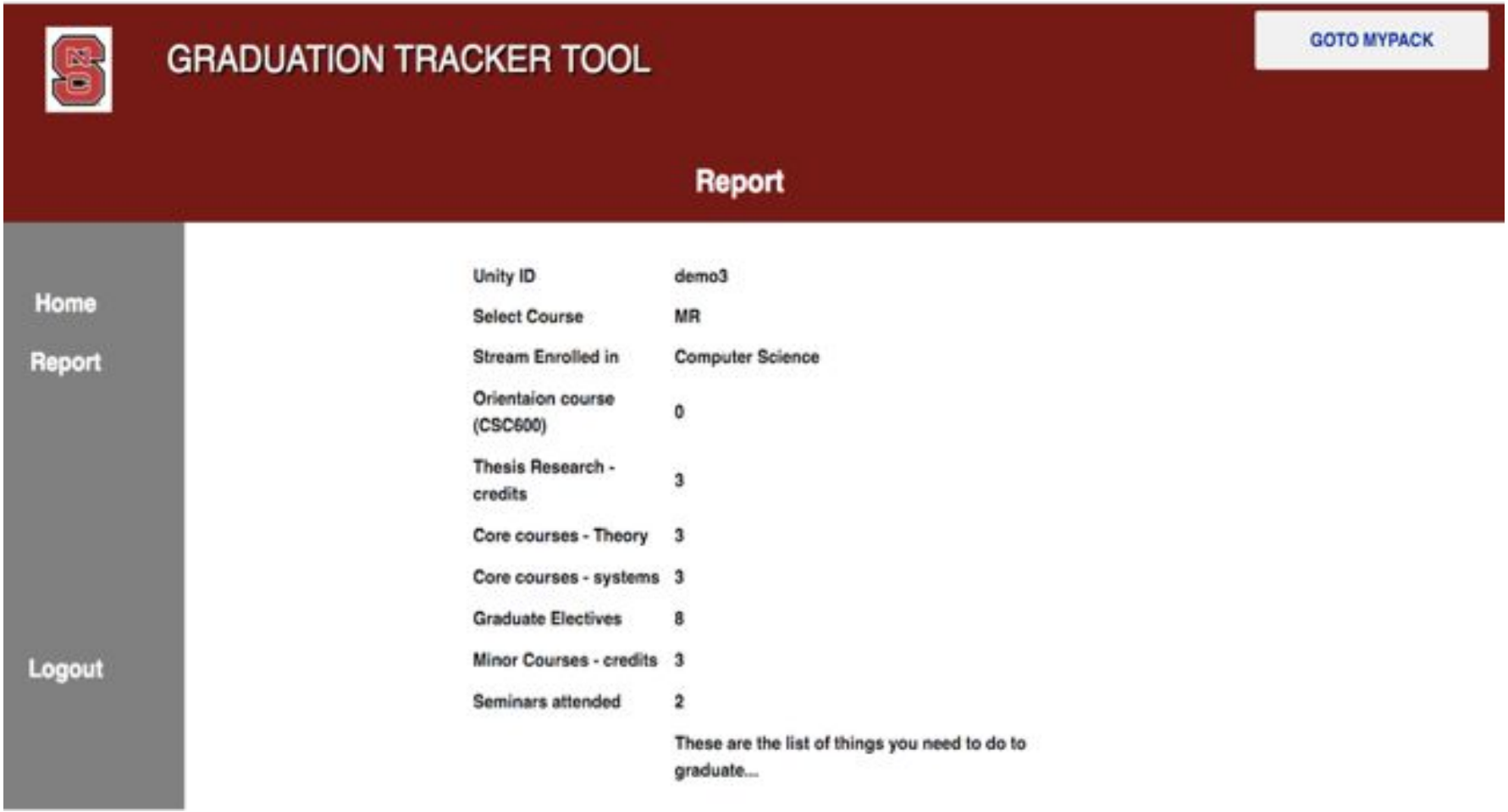
Virtual walk through…

Register New User…

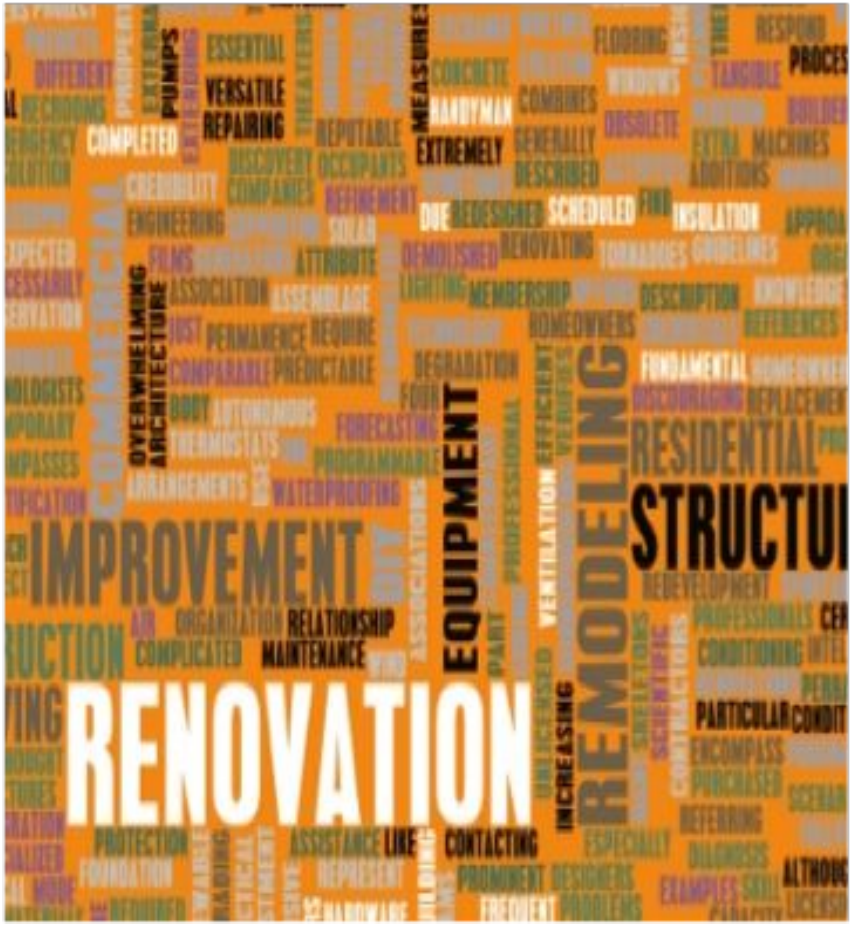
Edit Profile Information…



Report generated…



Big room for improvements



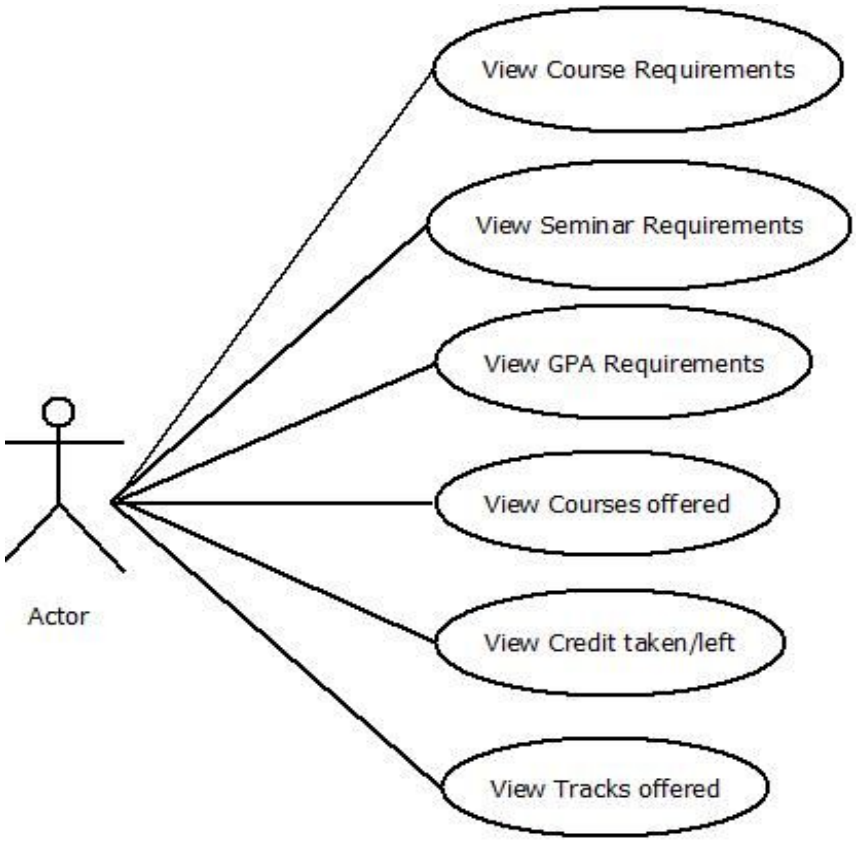
- User Interface
- More suggestions
- Notifications
- More and more data…

Solution 3: Grad Portal - Enhancing the existing portal

Idea

- Integrating a new solution within the existing portal
- Focus on user experience (ease of use, visual cues: less cognitive strain, legends, etc.)
- One stop solution

USE CASE DIAGRAM



NORTH CAROLINA STATE UNIVERSITY

MYPACK PORTAL

Computer Science | Data Science Track | Software Engineering Track | GPA Requirements | Seminar Requirements | Graduation Checklist

Theory:	CSC 503 - Computational Applied Logic, CSC 505 - Design and Analysis Of Algorithms, CSC 512 - Compiler Construction, CSC 565 - Graph Theory, CSC 579 - Introduction to Computer Performance Modeling, CSC 580 - Numerical Analysis I, CSC 707 - Automata, Languages and Computability Theory,	Max Required: **2** Taken: **0** Remaining: **2**
Systems:	CSC 501 - Operating Systems Principles, CSC 506 - Architecture Of Parallel Computers, CSC 510 - Software Engineering, CSC 520 - Artificial Intelligence I, CSC 540 - Database Management concepts and Systems, CSC 561 - Principles of Computer Graphics, CSC 570 - Computer Networks,	Max Required: **2** Taken: **2** Remaining: **0**
Advance Alternative Core Courses:	CSC 720 - Artificial Intelligence II, CSC 573 - Internet Protocols,	

Core Course(s) already taken

Core Course(s) required and offered in current semester

Core Course(s) not taken and cannot be considered core but elective, these may or may not be offered in current semester

Solution 3: Enhancing the existing portal

Summary:

	Credits Required	Credits Taken	Credits Remaining
Core Courses CSC 510 - Software Engineering, CSC 540 - Database Management concepts and Systems,	9	6	3
Computer Science graduate electives CSC 522 - Automated Learning and Data Analysis, CSC 554 - Human-Computer Interaction, CSC 555 - Social Computing, CSC 563 - Visual Interfaces for Mobile Devices,	12	12	0
Orientation Courses CSC 600 - Computer Science Graduate Orientation	1	1	0
Computer Science graduate electives, or other "restricted" electives	9	0	9
Total	31	19	12

Core Course(s) already taken

Core Course(s) required and offered in current semester

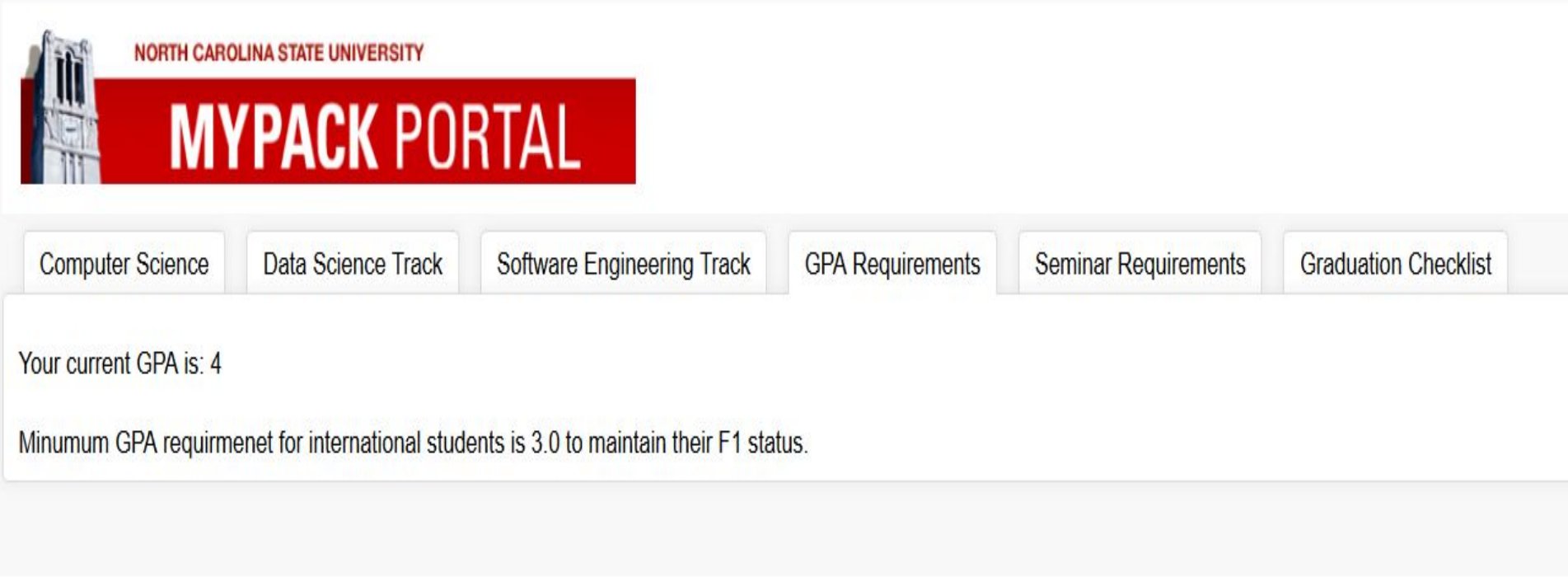
Core Course(s) not taken and cannot be considered core but elective, these may or may not be offered in current semester

NORTH CAROLINA STATE UNIVERSITY

MYPACK PORTAL

Minimum number of seminar for MS-CN:	4
Attendend so far:	1
Download attendence form:	form
Check your attendence via link:	link
Tentative Schedule:	link
More information:	link

Solution 3


NORTH CAROLINA STATE UNIVERSITY
MYPACK PORTAL
Computer Science
Data Science Track
Software Engineering Track
GPA Requirements
Seminar Requirements
Graduation Checklist
Your current GPA is: 4
Minumum GPA requirmenet for international students is 3.0 to maintain their F1 status.

Advantages :

- Introducing the enhancement within the existing tool helped in having an edge due to the familiarity quotient.
- The colored legends provides visual cues and make it easier for user to understand which courses are offered etc.

Disadvantages:

- Tab based: more number of tracks would lead to more number of tabs in the solution, making it messy.
- All the processing is done at the client side.

Future Enhancements

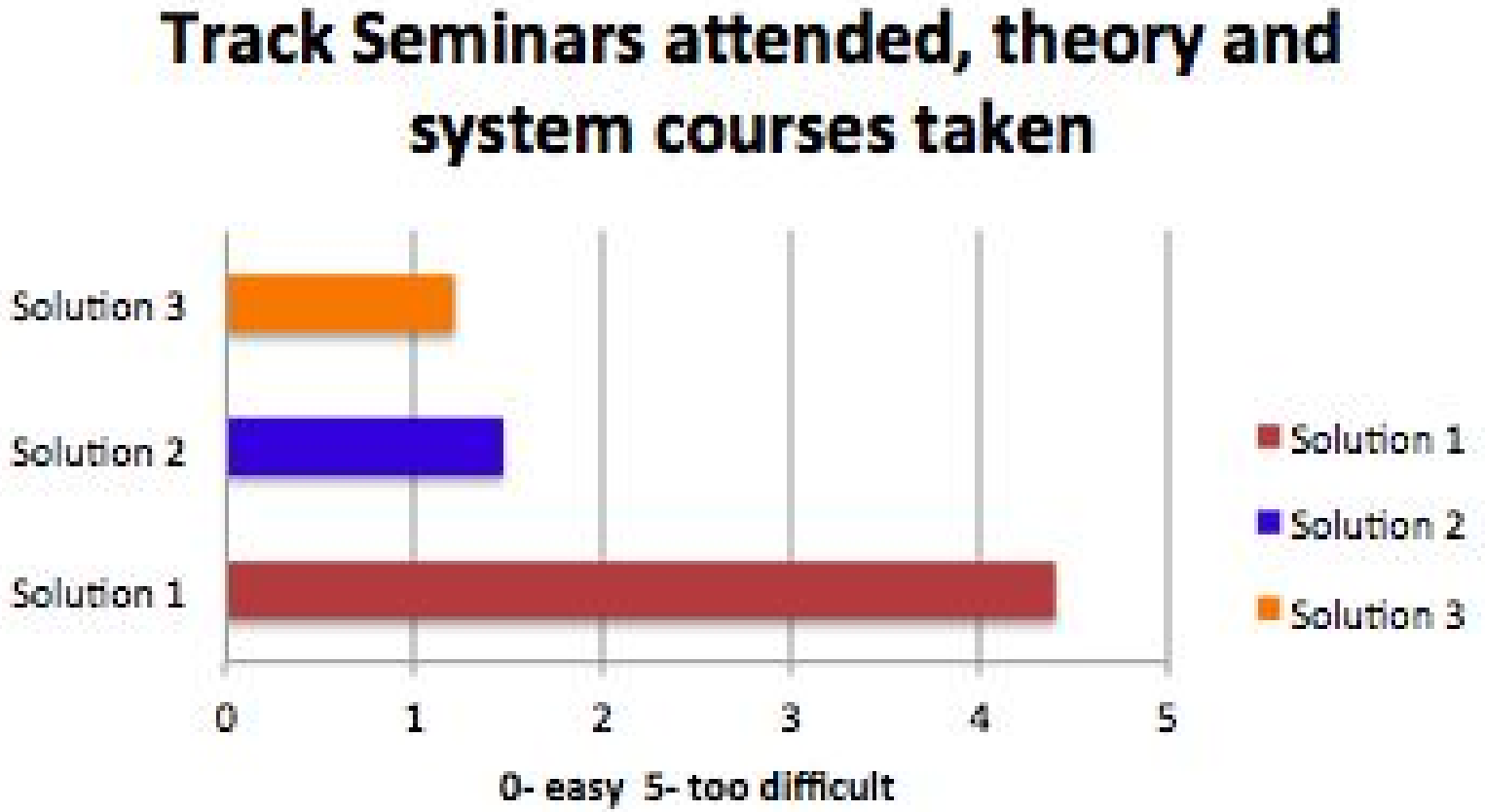
- Time clashes between two available courses can be handled.
- Currently supports client side scripting: an enhancement can be store data into database and pushing logic on to the server side backend(node.JS or java).
- Support more platforms

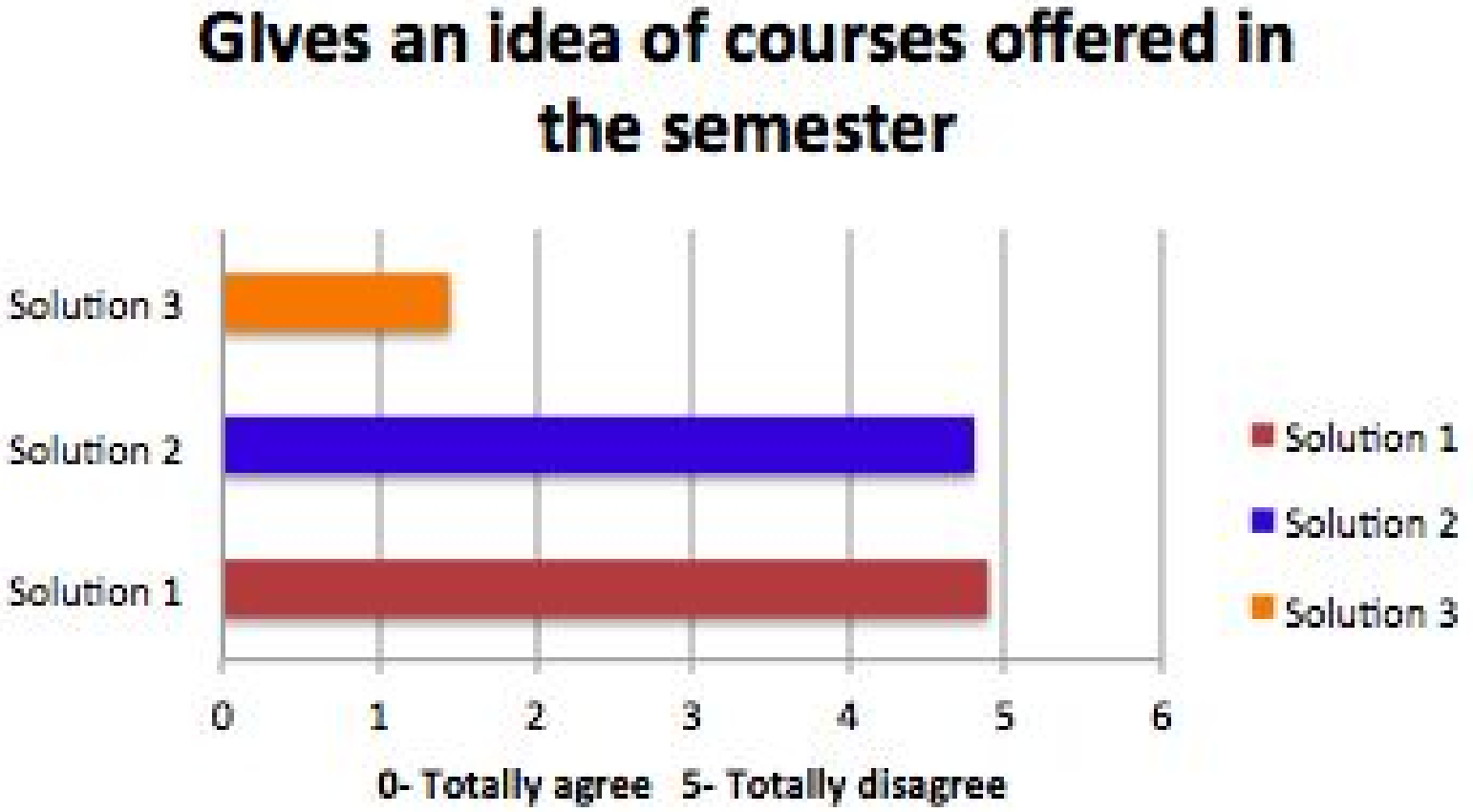
Evaluation

Participants

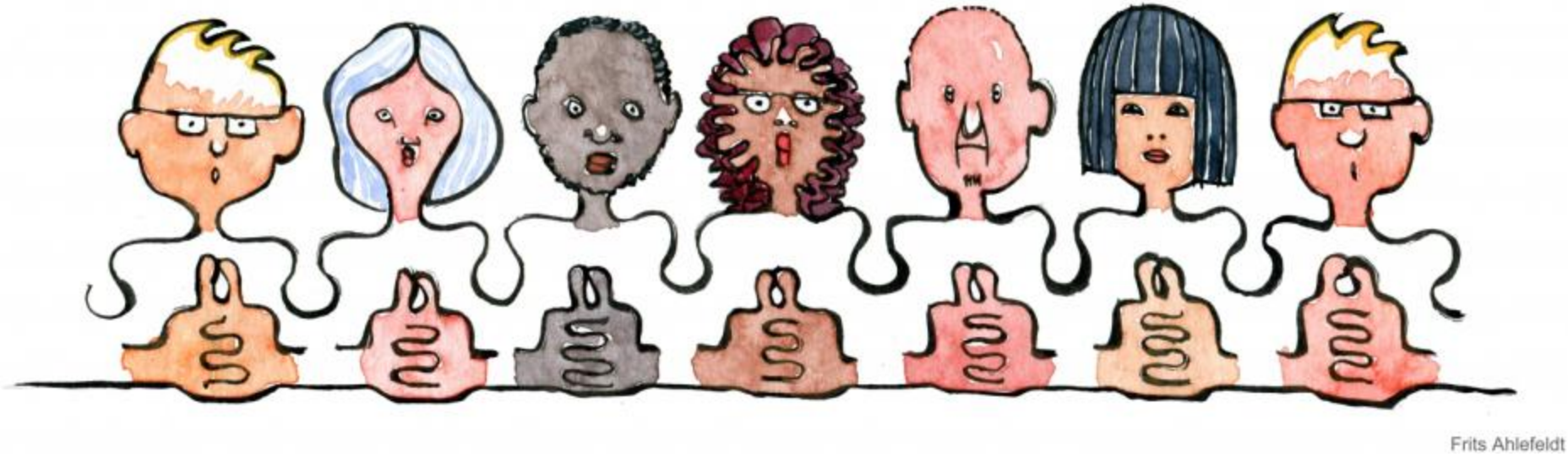
- 20 NCSU graduate students
- Studying Computer Science
- 12 students in their 2nd semester
- 8 students in their 4th semester

Ability to extract Graduation Requirements
Solution 3
Solution 2
Solution 1
0
1
2
3
4
5
0- easy 5 - too difficult
Solution 1
Solution 2
Solution 3


Track Seminars attended, theory and system courses taken
Solution 3
Solution 2
Solution 1
0
1
2
3
4
5
0- easy 5- too difficult
Solution 1
Solution 2
Solution 3


Gives an idea of courses offered in the semester
Solution 3
Solution 2
Solution 1
0
1
2
3
4
5
6
0- Totally agree
5- Totally disagree
Solution 1
Solution 2
Solution 3

VERDICT



THANK
YOU
GRACIAS
ARIGATO
SHUKURIA
BOLZÏN
MERCI
BÏYAN
SHUKRIA
DANKSCHEEN
TASHAKKUR ATU
YAQHANYELAY
SUKSAMA
EKHMET
MEHRBANI
GRAZIE
KOMAPSUMNIDA
JUSPAXAR
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NENACHALHYA
UNALCHÉESH
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HÄTUR
EKOJU
SIKOMO
MAKETAI
MINMONCHAR
PALDIES
LAH
MAAKE
SANCO
MERASTAWHY
GAEJTHO
TAVTAPUCH
MEDAWAGSE
AGUYJE
FAKAAUE
BAIKA

References:

- Mypack Portal
-Proposal Document
-Images:
-https://hikingartist.com/, thank you, evaluation image, getting workdone, problems, getting to work, cartoon strip, any questions