

Kaaleen

GROUP CODE : T24

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PROBLEM STATEMENT

As ordinary humans, who are not gifted with super-man like powers to never forget, we tend to forget everything, from the littlest of things, like our PIS deadlines, to some pretty major stuff, like our mom's birthday. We forget to have lunch, to sleep at time. Now these are issues that already have pre-existing solutions. But there's certain things that we all forget or misplace from time to time— our keys, wallets or other such hard-existing items that if misplaced can lead to a lot of stress and wastage of precious time. They don't seem to have any proper solution present in the market either.

We are aiming at solving these simple but head aching problems that we all face, with our project idea, which will be a minimal yet elegant solution to all your such problems, and can be used by everyone who believes that they have had such issues before, or might be on the verge of having one.

The users of our project will include people who face actual mental diseases relating to forgetting, like people suffering from Alzheimer's disease or people who just like leaving their remembering problems to modern day solutions and live their lives care free.

PROOF OF SIGNIFICANCE OF THIS PROBLEM

"Around 15 million of us will leave a cup of tea to go cold while a similar amount will forget where they put the keys to their house or car."

—The Telegraph UK

Where people keep their keys and where they keep their wallet are the second and twentieth most forgotten things respectively, according to an article of Telegraph.

Further, quoting from an article of Bustle:

"According to an article in Psychology Today by Susan Krauss Whitbourne, Ph.D, there's actually a very good reason for [forgetting about things]. Research shows that in order for us to remember things (i.e. where we put our subway card) we must first have encoded it in our brains by being conscious of our actions in the moment.

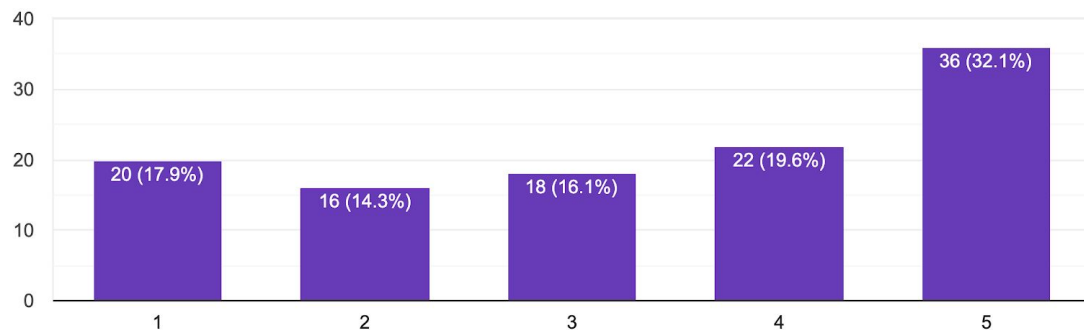
The problem, Whitbourne said, is that most of us "mindlessly go about our day's activities, often preoccupied with several concerns at once. We all dissociate to a certain extent ("multi-task"), and so the part of our brain carrying out routine activities doesn't connect with the part of our brain responsible for conscious thought." This means that we're very likely to forget simple things, like where we parked our car, or the receipt we needed in order to return an item at the store — our mind is working on ten other things in that moment."

The article also states the best way to help with this is by keeping designated spots for common objects.

Our project aims at making life simpler in the sense that people would have one less thing to worry about in their daily lives. They won't ever have to be anxious about forgetting their keys, or wallet, or any important documents after using this project.

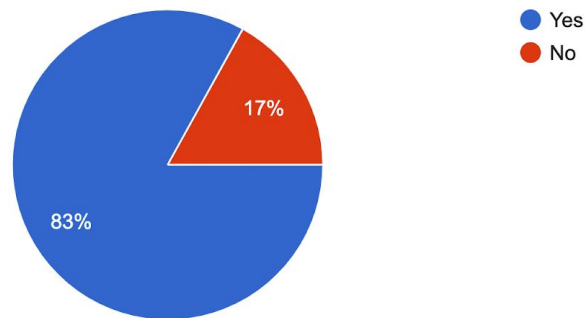
We also conducted a survey asking how often people forget things at home and how keen they would be to use this project. The following are the statistics of their responses:

How often do you forget something important (keys, wallet, etc) at home when going out?
112 responses



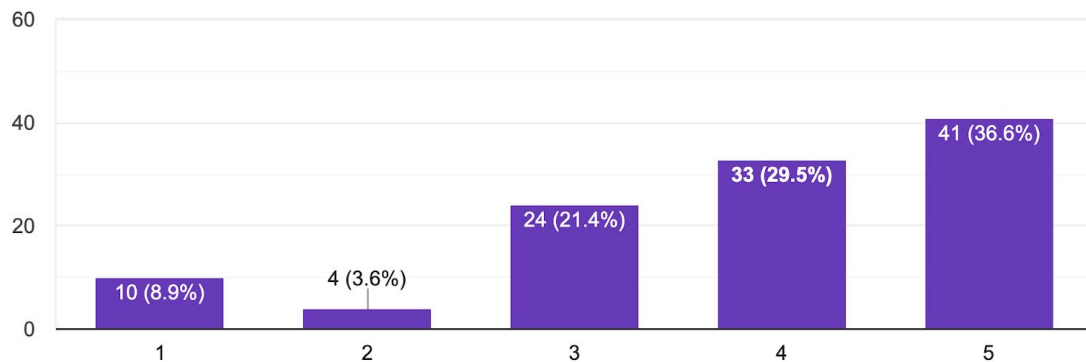
Do you wish there was an app/device that helped you track important items at all times?

112 responses



If such a device/ app is developed, how keen would you be to use it?

112 responses



PROOF OF NOVELTY OF THE PROBLEM OR PROPOSED SOLUTION

"It's Monday morning and I have to get to work by 9AM since I have an important meeting today. I had set an alarm for 7:30 but failed to get up and got up at 8:15AM, after which I just rushed, since I have to leave by 8:30 at all costs. At the same time, my mind is filled with stress regarding the meeting. I rush down to my metro station, which is a 10-minute walk from my house. After reaching the metro, I realise that I have forgotten my wallet at home, which houses my metro card as well, thus not being able to make it on time to my work."

"I leave work midday to scoop up my sick toddler from daycare. He's listless and cranky, but we'll be home soon. On my doorstep, I dig around in my bag for my keys, as always. Only this time, no keys. I look at my frigid child who could vomit at any moment. Why me? Why now? It's a howl of helplessness that echoes across doorsteps this time of the

year as harried multitaskers in the dead of winter find themselves forgetting the most basic things. What's wrong with us? According to brain experts, my recent predicament was entirely predictable the moment I left the house that morning. I had more on my mind than usual, not the least of which was whether my kid may or may not have been ill. And while I live and work in the world of instant updates, 24-hour information and gadgets that respond to me in nanoseconds, my brain has its limits. And I had exceeded them. There was no app for this.”

Losing things is irritating and yet we are a forgetful people. The average person misplaces up to nine items a day, and one-third of respondents in a poll said they spend an average of 15 minutes each day searching for items—cellphones, keys and paperwork top the list, according to an online survey of 3,000 people published in 2012 by a British insurance company.

Everyday forgetfulness isn't a sign of a more serious medical condition like Alzheimer's or dementia. And while it can worsen with age, minor memory lapses are the norm for all ages, researchers say. Stress, fatigue, and multitasking can exacerbate our propensity to make such errors. Such lapses can also be linked to more serious conditions like depression and attention-deficit hyperactivity disorders.

The only reason that we were able to come up with this idea was because one of our members forgot his hostel keys at home one time and had to camp in his neighbours' room for that night. It hit us that day that this is something that hasn't been done, and a simple implementation, as simple as a mat would suffice greatly.

Thus, we decided to work on Kaaleen as a solution to the problem and as our PIS Major Project.

TENTATIVE TECHNICAL IMPLEMENTATION DETAILS

We are planning to implement Object Detection using Radio Frequency Identification(RFID). Data transfer is established with the use of Wi-fi between the mat and your phone. A locked house will be sensed, and informed to the app for the same. An app interface will be created for check-listing objects.

Used: Arduino, Wi-fi module, modified RFID, app development, motion sensors.

TIMELINE

Week 13: Purchasing RFID sensors, learning mobile application development using various programming languages.

Week 14: Implementing connection of sensors with the mobile application, finding sensors that detect presence of persons within the house.

Week 15: Testing the sensors using various objects, presenting a working prototype of the project.

Week 16: Testing the overall working of the project.

(The weeks mentioned above are in reference to the weeks in the Academic Calendar of the Monsoon semester of 2019)

REFERENCE LIST

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