Memory Path: Learn it (on) your way!

Memory Path: Learn it on your way!

Memory Path is the key to a place orientated way of learning. Just plan your path through the city and the app will provide you with theoretical knowledge. The app uses GPS and Picture Tracking to remind you of the most important math formulas or vocabulary you need to remember in your next exam.

Team: Memory Path

Team members

Evelyn Bernhardt (Design and Development), Florian Rhein (Design and Development), Fridolin Kratz (Design and Development), Hannah Drews (Design and Development), Hannes Stelzer (Design and Development), Joshua Weickardt (Dokumentation), Julian Kling (Design and Development), Leon Krebs (Dokumentation), Michelle Kubitza (Dokumentation), Roman Schlingel (Design and Development), Vasilis Xan (Dokumentation)

Members roles and background

Hannes Stelzer
Idea Creator & Project Manager
Business Information (B.Sc.) and Trainer for ideation. Design Thinking Trainer, SCRUM Master and Innovation Consultant.

Fridolin Katz
Mockups, Java Development
Mechanical Engineering (B. Sc.)

Vasilis Xanhakis
Documentation

Industrial Engineering (B.Sc.)

Evelyn Bernhardt
Software Architecture and Design, Requirements Management
Computer Science (B.Sc.), IT Management (M.Sc.)

Hannah Drews
Design and Development of Prototype, Requirements Management
Psycholgy in IT (B.Sc.), IT Management (M.Sc.)
Working in requirements management for HR IT projects at a big german logistic company.

Julian Kling
Backend Development, User Stories Creator and Video Cutter
Technical Consultant
Media, IT and Management (B.Sc), IT Management (M.Sc)

Leon Krebs
Project Management, Requirements Management
Business Administration (B.A.) , IT Management (M.Sc.).
Works as a project manager creating individualized software for big and small enterprises.

Michelle Kubitza
Project Management, Marketing and Design
International Cultural and Business Studies (B.A.), IT Management (M.Sc.)

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Software Architect, iOS Developer
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Contact details

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Solution Details

Solution description

Our solution aims to help the user memorize information faster and easier, while turning the tiring task of learning materials by heart into a more enjoyable activity. Inspired by the loci principle, that has been in use since Ancient Greece and is a strategy of memory enhancement which uses visualizations of familiar spatial environments in order to enhance the recall of information, our application wishes to adapt, update and enhance this method, creating a learning environment,

which allows users to visualize and expand their "mind palace" or "memory palace" in order to help them memorize information. A big problem was that rooms are limited. A solution for that might be virtual rooms, but they are making a big effort to build. Instead of a room, we are using routes - so called "paths"- created by the user. Each path includes custom "points of interest", from a specific landmark to an attention grabbing detail, to which the user can appoint questions and answers. Afterwards the user can use the app to practice and study, either by staying home and virtually going through the path he created or by going outside and using the app on the go. Additional features aim to improve the flexibility of the app, enrich the experience and provide variety -much needed in the day to day life of today's students. The ability to share paths with others, practice or compete with friends and complete challenges further motivate the user, while chance to use the app promotes physical activity.

Solution context

Be it math formulas, dates, facts or names, memorization has always been a big (and often unpleasant) part of a students life. Most of the time the process lacks creativity and is of little interest to the students. Additionally, the traditional, straight-forward approach seems to be quite inefficient, as it is quite tiring and not very effective (most of the time we have trouble remembering things we learned by heart or end up mixing them up). Through our app we are attempting to change the students' attitude towards the mundane process of memorization and introduce a more creative way of learning, that is inspired by and expands upon the loci method and uses modern technological means to make the method more interactive and accessible. At the same time, the app encourages physical exercise, as it promotes outside activities, thus providing some variety to the students' busy day-to-day lives.

Solution target group

The app is mainly aimed towards school and university students, as they are the ones most often required to memorize large amounts of information in a short period of time. However, this poses no limitation, as the idea expands to anyone who wishes to do the same and the possible implementations in groups other than students vary. From people learning a new language to those preparing for a theoretical exam, trying to learn a speech by heart or trying to acquire a new skill (e.g. people studying for their drivers license), anyone can use the app to make the mundane task of memorization easier and more enjoyable.

Solution impact

We expect that users will learn to learn again through our app using the loci method. With our solution many people have the possibility to consolidate and even expand their knowledge during their daily life or when discovering a city. We can measure the impact of our solution, by monitoring the number of students using the app and the intensity of its use. The build-in statistics provide an overview of one's own performance and progress and (on a larger scale) give us information on how the users respond to the app and take advantage of its features. An increased number of regular users would serve multiple functions, as it would prove the effectiveness of the app and provide crucial feedback from the first-hand-users, while ensuring a wider and richer community, generating more "paths" and indirectly aiding us to expand, refresh and improve the app.

In order to measure the effectiveness of the app, the users record which knowledge maps are still open, gone through or already internalized. This system is known from driver's license tips, for

example. From this a score is generated with which the different users of the app can compare themselves and challenge each other. The direct impact can also be measured.

Solution tweet text

Memory Path is the key to a place orientated way of learning. Just plan your path through the city and the app will provide you with theoretical knowledge like vocabulary you need to remember in your next exam. #DigiEduHack #Semesterhack #memorypalace #education #memorypath

Solution innovativeness

What makes your solution different and original? Can anything similar be found on the market?

Although the method that inspired us to create this app is quite an old and proven technique to improve one's capacity for memorization, not many people seem to be taking advantage of it outside of a purely theoretical context and (most importantly) no efforts have been made so far to expand upon the original concept using today's digital media. Furthermore, the process of learning through answering questions remains monotone and any attempts to digitalise it revolve around merely transferring the "cards" to your screen, rather than finding meaningful ways to take advantage of the means we are given. Our process offers a never-before-seen level of interactiveness and creativity to the users, making the task of memorization more interesting and enjoyable, but also more effective. The ability to share your "paths" with others and practice or compete with them provides additional incentive to better yourself, while the choice to learn either from home or walk the paths you have chosen takes full advantage of modern means, providing important flexibility and variety to the user.

Solution transferability

Our app is primarily made to learn and internalize information like vocabulary or formulas with the help of paths and places. This concept can of course also be applied to other contexts. For example, it would be conceivable to introduce new students to the campus or the facilities. In addition, the concept can also be used as a digital scavenger hunt to introduce people to new places or eaven entire cities. For example, on large company premises or at airports in order to provide new employees better with rules, information and knowledge.

Solution sustainability

The project carried out here has already produced a finished and functional dummy. On the basis of this, a finished app can be programmed with front and backend in the medium term. With the help of an app that is then available in the Apple App Store and Google Play Store, a larger number of users can be addressed in the medium term. In the long term it is conceivable to introduce the app at different universities and schools to make it easier for students to learn. In addition, it is also conceivable that teachers, students and schoolchildren can create paths with, for example, vocabulary or companies and share these with each other and other users. In the future it would also be possible to cooperate with language learning apps to expand their offer.

Solution team work

During the short duration of the Hackathon we worked intensely and with very good coordination.

After the idea coordinator elaborated further on it, we discussed and made changes to the original concept. We decided what aspects of the app and planning we needed to prioritize and choose what we would be able to fulfill in the span of the Hackathon. Since, the time available and the small size of our team did not allow for a complete and satisfying development of the app, we decided to leave the programming itself to be done after the end of the hackathon (the second phase of the project). Instead, we tackled other aspects of the project and worked out how the app will function and what capabilities it will have . In order to work more efficiently we were divided into smaller teams, that each dealt with separate tasks and scheduled bigger team meetings every 3-4 hours to give updates, provide feedback and resolve issues that came up during the process. The teams focused on designing the look and feel of the app, creating a working app concept, we could interact with in order to check the app's functionality, generating user scenarios and documenting the progress we have made as well as the tasks that must be dealt with in an archive. All in all, we worked really well as a team, using everyone's skills and interests to push the project further and fittingly distributing the workload: no one was found without a task and we made sure the full weight of the app did not fall on only a couple of the members. Additionally, our decision to focus on other aspects of the app, rather than the programming itself, reflects our willingness to keep working on the project as a team, even after the end of this event, since we chose to not undermine and downgrade the original idea in order to adhere to a strict time schedule, but to expand upon it and create a fully fledged app and a long running project.

Future ToDos:
A part of the team will implement the app with the Flutter Framework as next steps. So we have native apps for both IOS and Android. We can use our already existing REST backend and bring our created mockups into real apps.