FACULTY OF ENGINEERING
SCHOOL OF COMPUTING

COVER LETTER

TECHNOLOGY & INFORMATION SYSTEM
SECP1513-04
Chapter 2: The Internet, The Web & Electronic Commerce

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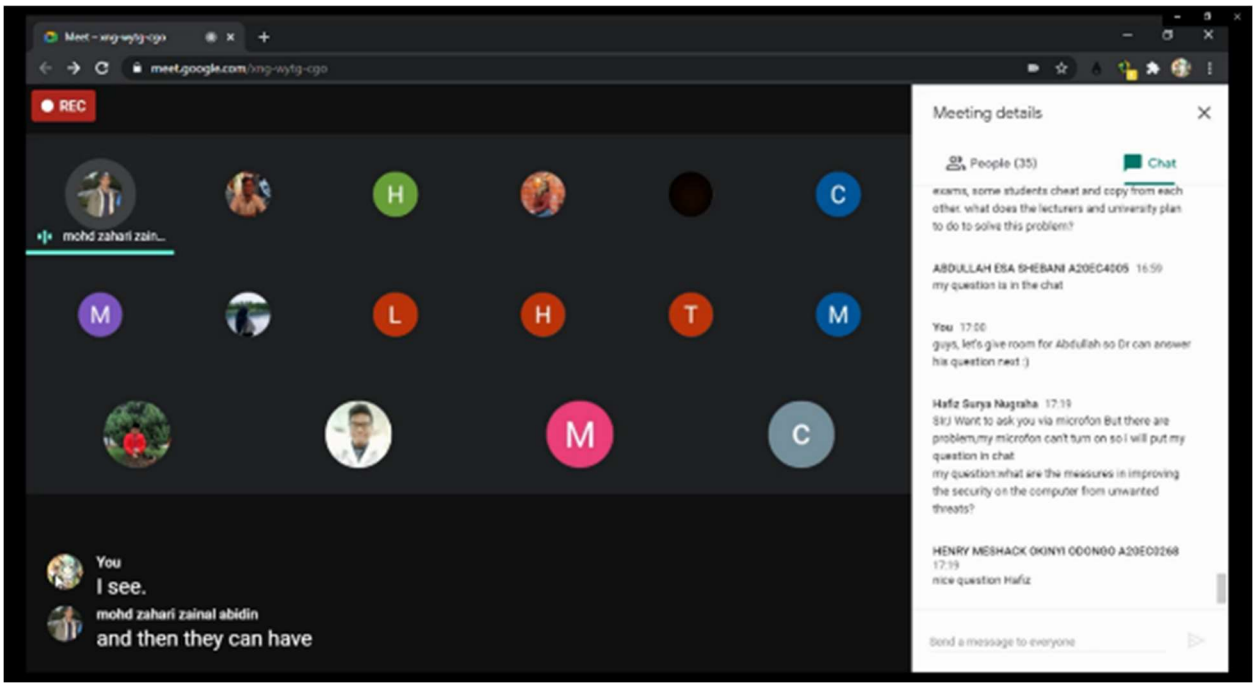
INTRODUCTION

In this report, we talk about the process of design thinking when doing a group project and also discuss the dangers of the internet to the users. The internet as we know it is an invaluable tool to us especially during this modern era where almost every single thing that we do are connected to it from shopping, research and work. However, when we use the internet we also need to be aware of the risks that comes with it since as the internet continues to grow larger, internet thefts and scams will also follow. This is a very important risk that everyone needs to know before using the internet because unlike normal thefts where usually it only involves our personal belongings, in the internet there are plenty of vital information that can be stolen that could give a huge impact to the user such as credit card information, personal information, our social media accounts and many more. This problem is even more concerning when we take into account that sometimes the user itself is not responsible for the scams and internet theft that they face due to other people who are using the same account and the most common ones are children. This is mainly because the internet nowadays is very easy to navigate through which makes It easier for younger people to use it. However, often times children that uses the internet are not educated on all the risks and dangers from using the internet. In light of this issue, we have decided to create a project related to this topic and find a solution to this problem.

DETAIL STEP AND EVIDENCE FOR EACH PHASE

Before we started our project, we first need to have a better understanding about the topic that we are doing and find out what are the problems that people are facing that is related to the internet. In order to do so, we have decided to do an interview with one of the staffs in UTM that is very familiar with this field and asked several questions about our topic.

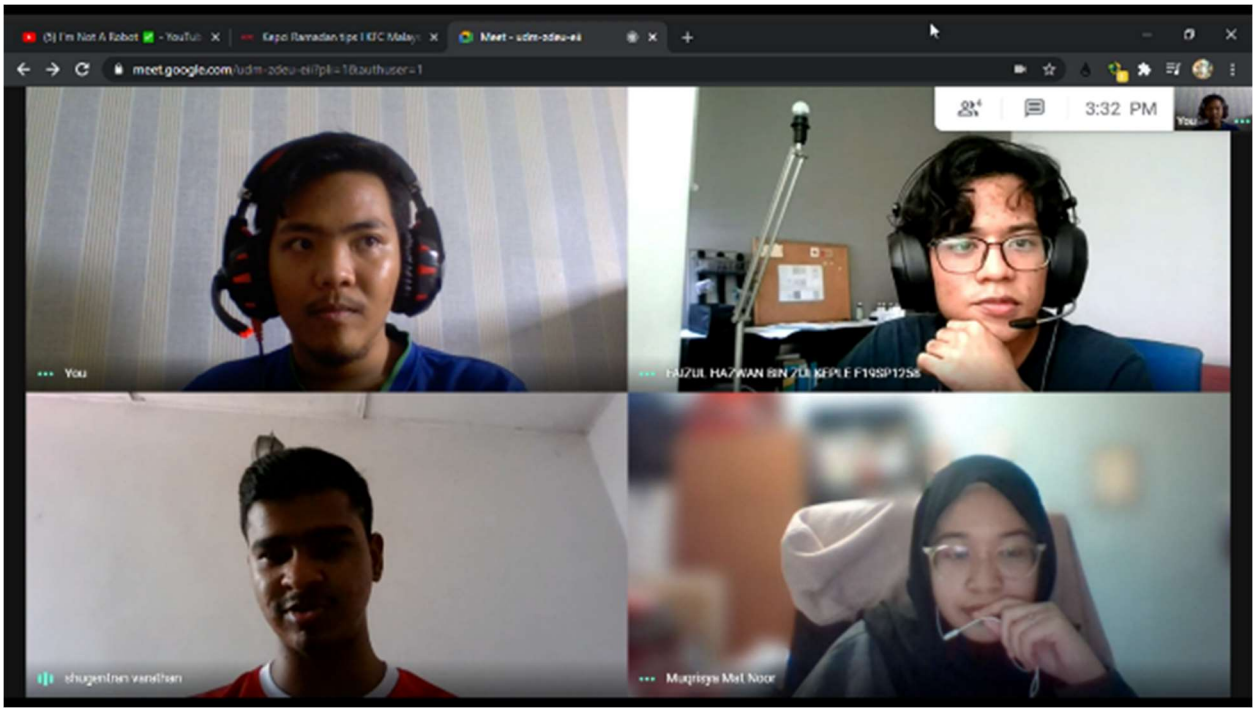


(interview session with UTM staff)

From the interview, we have gained a lot of knowledge about the internet and the general problems that comes with it and the one that we were most interested in was about child monitoring and safety in the internet. We discussed about how dangerous it can be to the child and even the parent if we let them to browse the internet freely and unmonitored. One of the reasons is that the child might be involved in a scam without the knowledge of their parent since they have no knowledge about the risks in the internet and how it works.

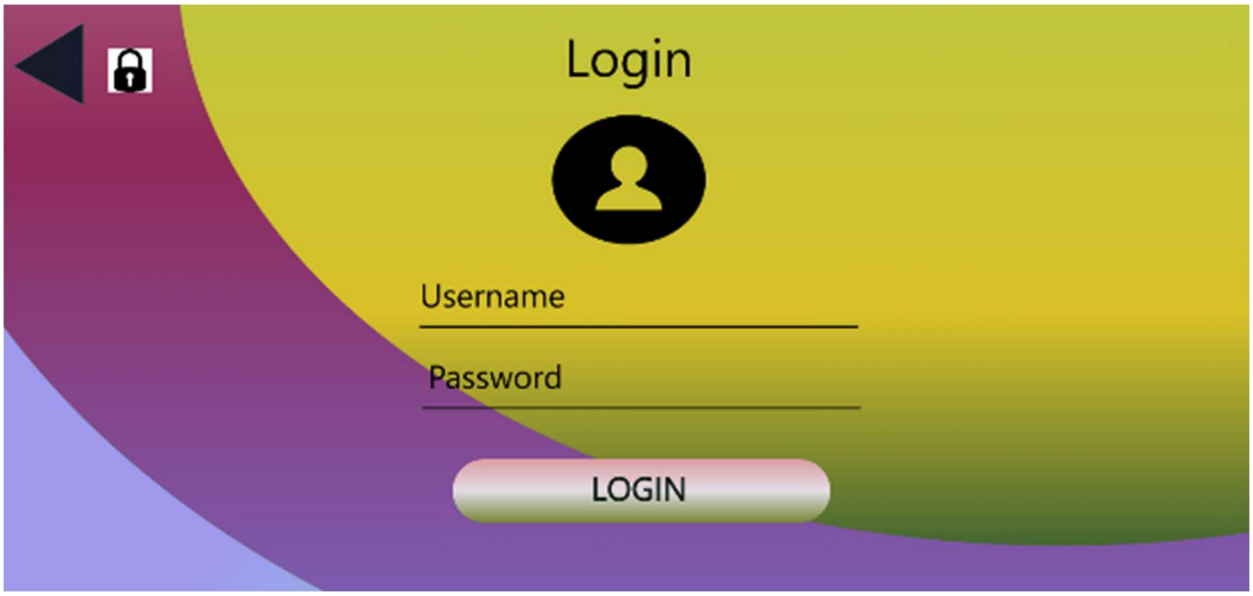
After we have discovered the problem, we started to analyze our observation during the interview and try to get a better understanding about the problem that we have discovered. From our discussions, the problem statement that we obtained was that there is no monitoring program for a parent to use to monitor their child on the internet browser.

The next step is the ideate phase where we try to find the solution to the problem. This is done through several different discussions between the group members and also through brainstorming sessions in order to grab as much ideas as possible to solve the problem so that we can make sure that the solution that will be chosen is the most suitable and realistic for a prototype.



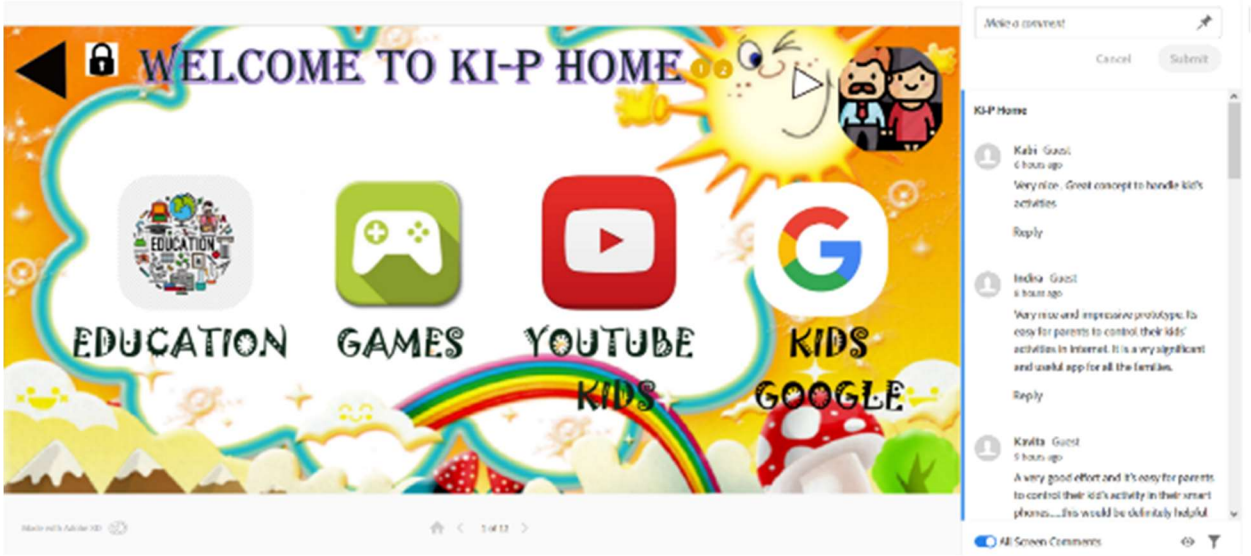
(discussion and brainstorming session)

From the brainstorming sessions that we have done, we have found the most suitable solution to the problem which is to make a parental monitoring program for the user on the browser. The next step for us is the prototype phase where we create a prototype of the program that we have decided on. For our project, we only need to make a prototype concept and not the actual program. This will help us greatly in imagining the final product of the program since it helps us visualize how the program will look and give us an idea of what we need to do in order to create the program.



(Prototype)

The next and also last step for us is to do the testing for our prototype. This is done so that we can make sure the prototype that we have created can actually solve the problems and fulfills all of its tasks. It is also done so that we can find any errors that could happen so that we can fix it later on. This is done by giving out a demo of our prototype to other people and asking them to give their opinions and criticism on it.



(Comments towards the prototype)

DETAILED DESCRIPTIONS

First, we took a problem where we think that nowadays kids can access to the internet anywhere and anytime without parental guidance as this can lead to many dangers to the privacy of the family. Thus, Irsyad thought that making a web extension would be great and suitable as the solution.

Then, we agreed in making a web extension and did a prototype of it. Shugen used Adobe XD in making the prototype as the software can give what we need to represent the prototype. Other than that, we use a colourful theme to attract the children and makes it more child-friendly.

During in making this prototype, there were few obstacles we had to face to make our prototype succeed. One of them is , Muqrisya was wondering what if the kids wanted to try accessing the parents' account and use the internet without parental guidance and control. Thus, Faizul came up with an idea where we can make two factor authentication. For example, whenever anybody who try to access the parents' account, they must enter a code that will be sent to the parents' phone number. This can create awareness to the parents as the notification will pop up on their phone. Plus, we think about the name of the prototype and came up with Ki-P , short yet meaningful as Ki represents Kid and P is for Protection. We made it very easy for people to memorize the name.

Next, after we have done with the prototype, we test it on the user, and received few opinions and comments about our prototype.

DESIGN THINKING EVIDENCE

SAMPLE WORK

These are sample work done by us and also evidence for the design thinking challenge.

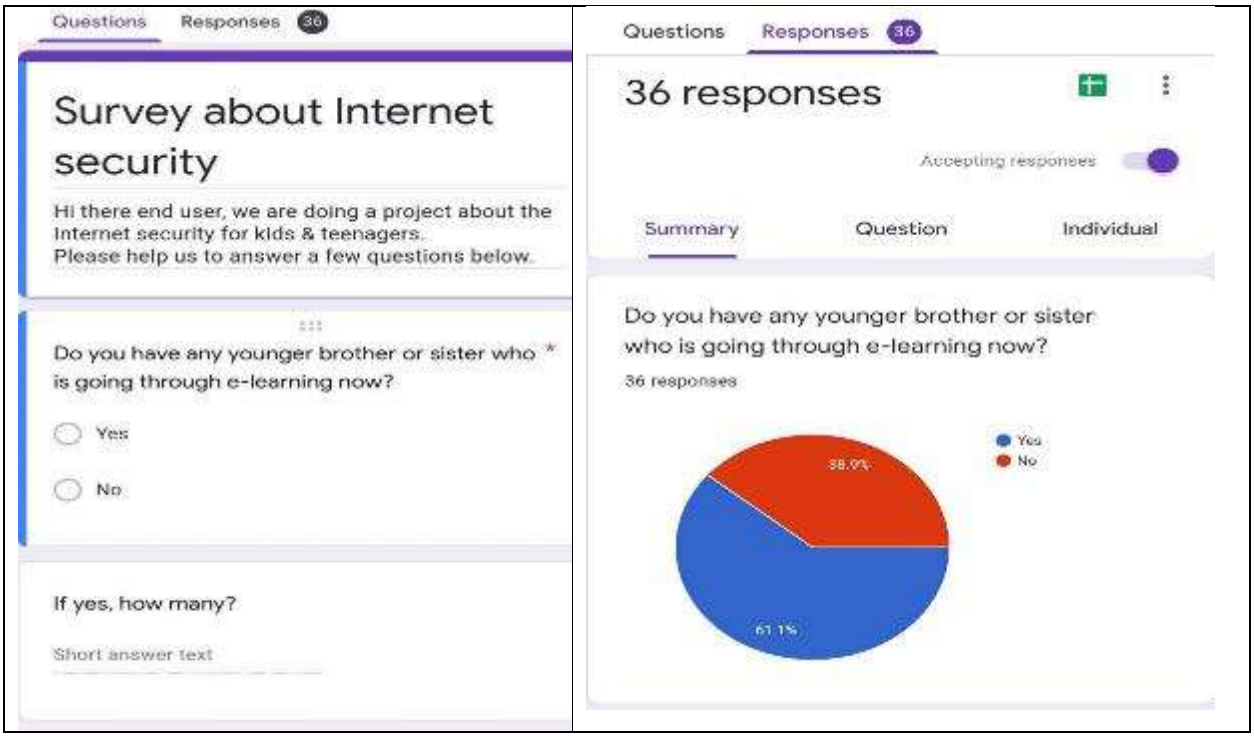
In this picture, we were talking about problem and were brainstorming ideas

Meanwhile in this picture, Shugen was talking about how the prototype is developed and we were also discussing about questions that should be asked to the user of the prototype.

RECORD FOR EACH PHASE

i. Empathy

We made a google form asking several questions to the user about having younger siblings who uses internet in daily life as our prototype is to help parents to minimize their kids' internet usage and monitor their kids' activities on internet.



If yes. how long do they surf the Internet a day?

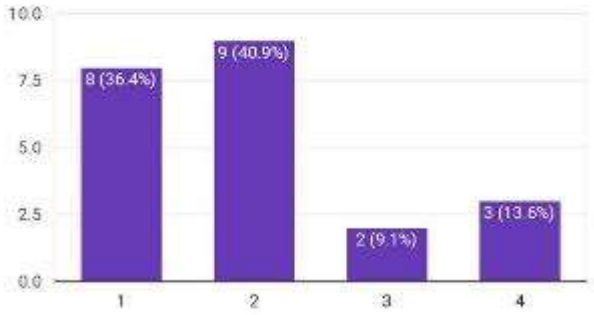
- Less than 1 hour
- 1 - 3 hours
- More than 3 hours

Do your parents taught you and your siblings a proper way to surf Internet? *

- Yes
- No

If yes, how many?

22 responses



Are you aware of this problems where nowadays kids & teenagers have access to many sites that are irrelevant to their age in the Internet which may have security threats? *

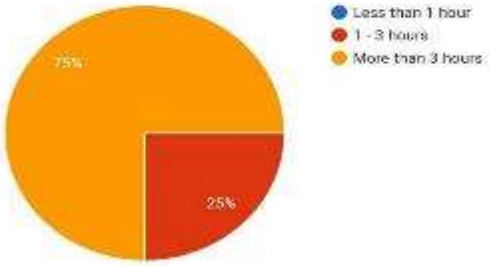
- Yes
- No
- Maybe

Do you support on the implementation of a secure program in the browser to keep the kids & teenagers safe from those unsecure & irrelevant sites? *

- Yes
- No

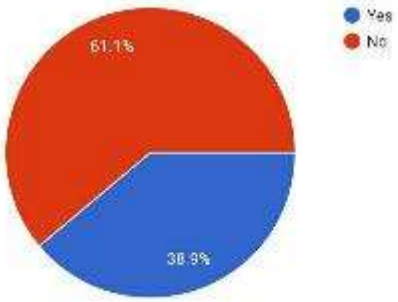
If yes, how long do they surf the Internet a day?

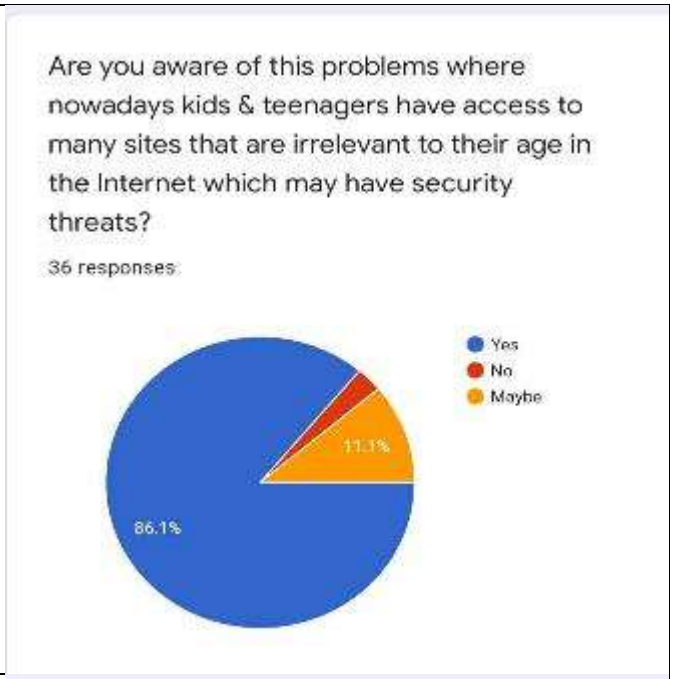
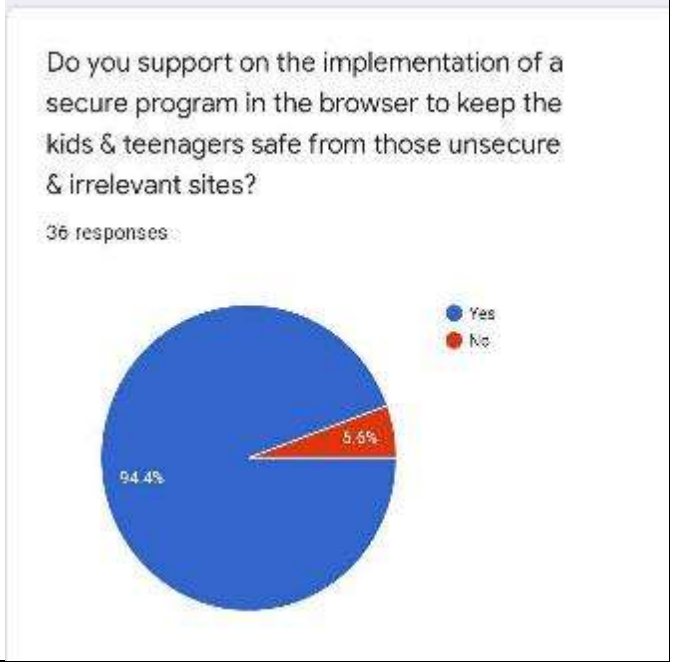
24 responses



Do your parents taught you and your siblings a proper way to surf Internet?

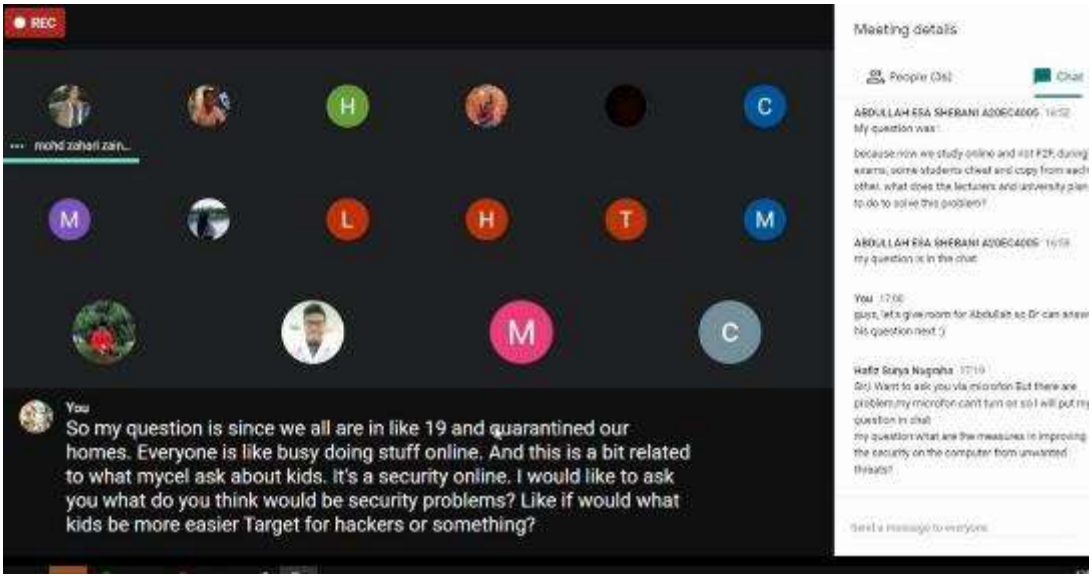
36 responses



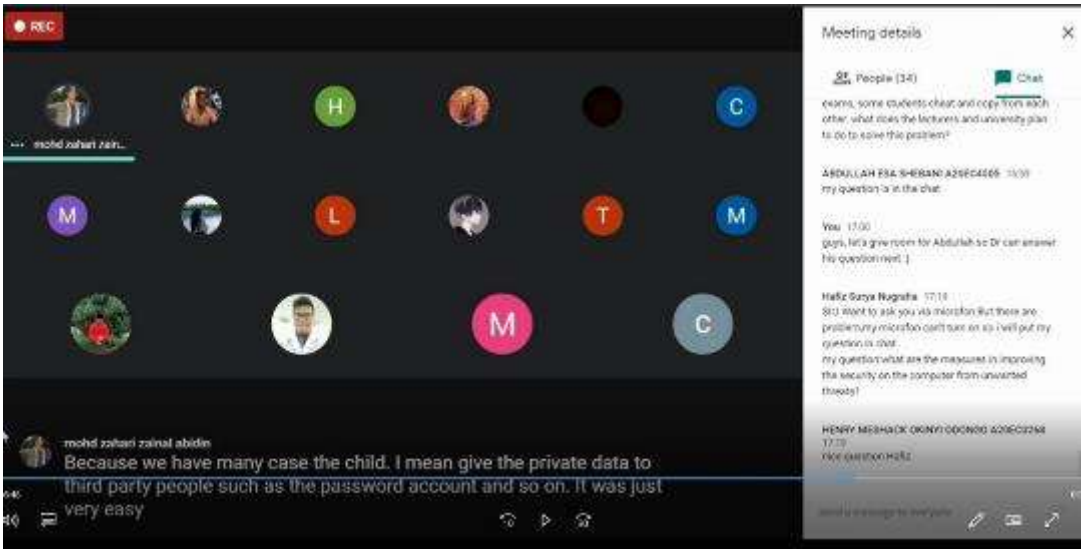
Other than that, we had interviewed an expert in Network Administration which is Mr. Mohd Zahari, we asked a question:

What do you think about the security problems when kids trying to access the internet?



Answer we got from Mr. Zahari was,

"First thing is my wife and I as the responsible parents have to monitor our children access on internet, second, you can install parental software and setting on what website they can access and cannot. Other than that, blocking any advertisements that contain pornographic content. Lastly, we have to teach our kids on how to serve the internet as this can increase their awareness on using the internet. When we teach them well, they will not access to the wrong website, also what most important is that they will not give or expose any private data or information to third party people for example, phone number, home address, CVV number of the father's card and many else. "



ii. Define

Security problems are faced by kids if parents do not monitor them at all. This situation can lead to many dangers that kids have to face either in short or long term. Children may expose their families privacy. For instance, address, phone number, and even their parents' credit card. This can lead to few dangers, which are cyberbullying, and cyber predators.

Cyberbullying is a well-known problem that most kids and teenagers have to confront. Cyberbullying can be similarly as terrible as different sorts of harassing, and somehow or another it can really be more regrettable. Cyberbullying isn't restricted to the play area; it can happen whenever youngsters are on the web, regardless of whether they're at home. Likewise, the domineering jerk can at times stay unknown, which can make the tormenting harder to stop. Children can be mocked in web-based media trades. Or on the other hand, in web based gaming, their player personas can be exposed to ceaseless assault, diverting the game from an innovative experience into a mortifying difficulty that grow into digital harassing over various stages and, in actuality.

Other than that, nowadays cyber predators frequently tail kids on the web, exploiting their honesty, absence of grown-up management and mishandling their trust. This can come full circle in kids being tricked into risky individual experiences in real life. These hunters hide via online media and gaming stages that appeal to kids—similar virtual scenes where namelessness encourages digital harassing. There, they can abuse not exclusively kids' honesty, yet in addition their endowment of creative mind.

iii. Ideate

During the brainstorm process, we tried to solve the problem. We made a prototype which is a web extension that parents can install on Google. This prototype will control and monitor the kids' internet usage. It is safe for the children to use the internet thus parents do not have to worry and waste their energy and time to check.

iv. Prototype

Each and every of our teammate ideas has been converted from logical design to physical design. Prototype is completely developed virtually with the software Adobe XD which is a software that are used by the professionals to design UI prototypes.
Here is how we made our prototype.

https://drive.google.com/file/d/1G-0j8jmqfH-eBmTijexoD8I0tCRSX4ef/view?usp=sharing

How does our web extension work? For Example, let's take Google Chrome browser which is common among many users. Well, we open Google Chrome and type "Chrome web store" on the search bar, then click on web extension, first thing we will see is our web extension which is Ki-P. Then, click on our extension and then click "Add to chrome". After that, click "Add to extension".

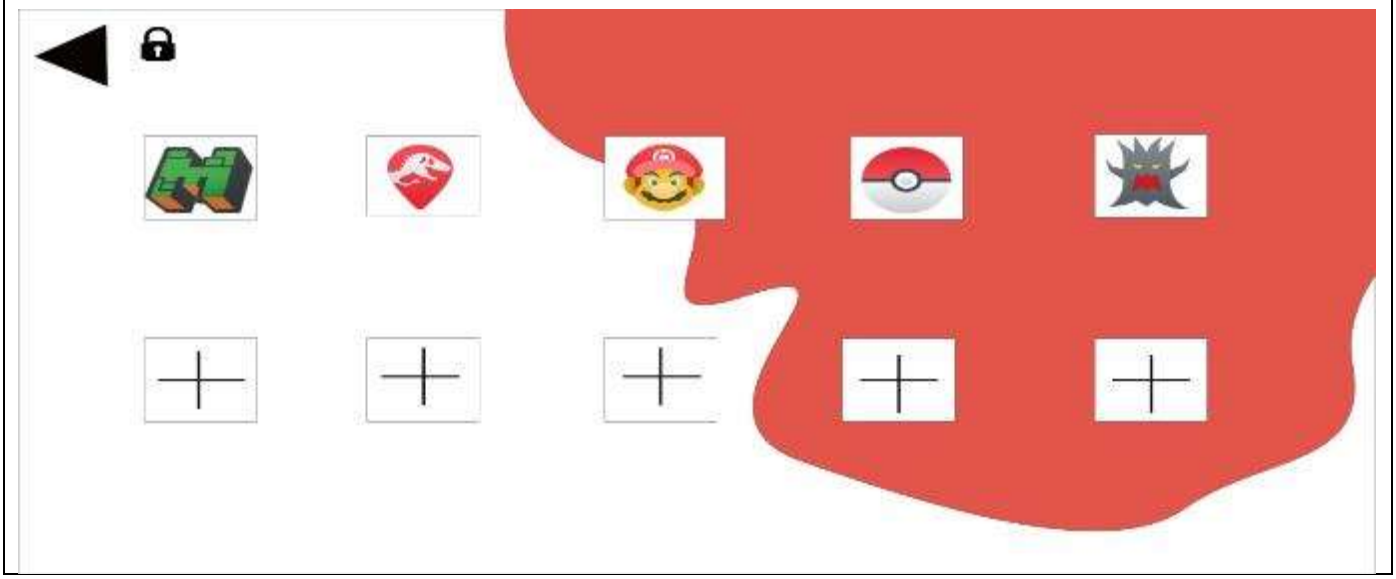
Now, our Google Chrome will be using Ki-P. After the addition of the extension, parents have to register their account. After that, the Google Chrome will be in parental control mode. On the first page, we have Education, Games, Youtube Kids and Kids Google icons.

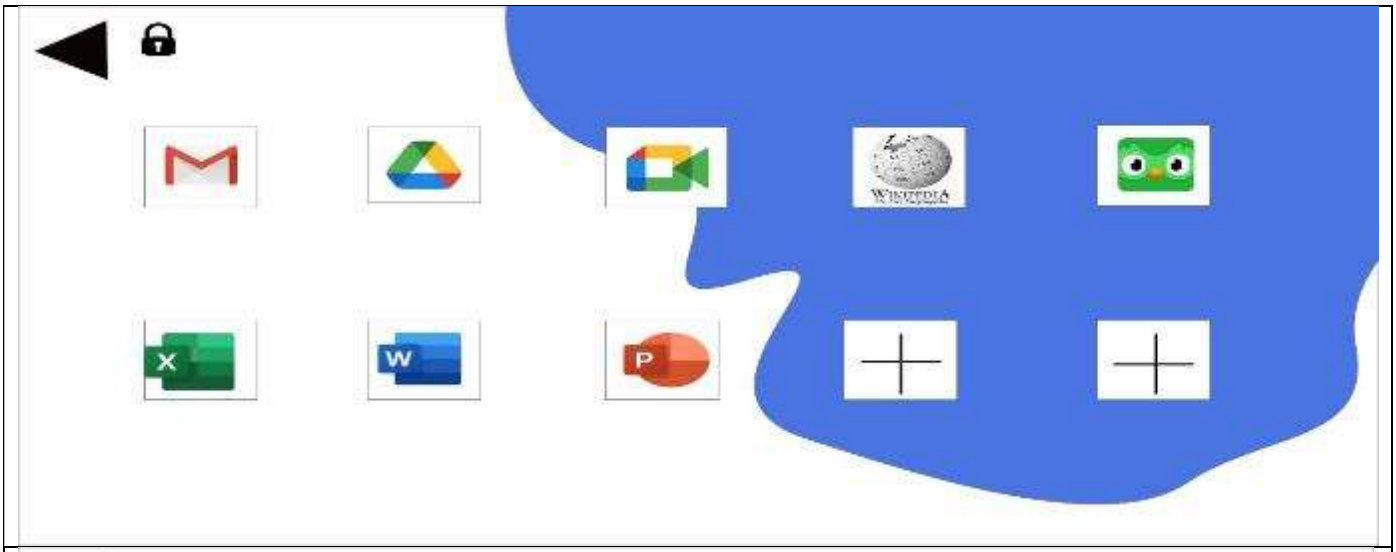
When the children click on every icon, everything is on parental control and they have limited website access even when they wanted to add more sites, they have to enter parents account first. As for the parents, they also can use Google Chrome, when they enter their account, Google Chrome will be on normal mode. Parents also can see the KI-P home status report after they login, where the report illustrates what applications the kids have used and the period of time usage. Furthermore, parents can create a new account except the kids.
Here is the prototype video on how it works on Google Chrome.

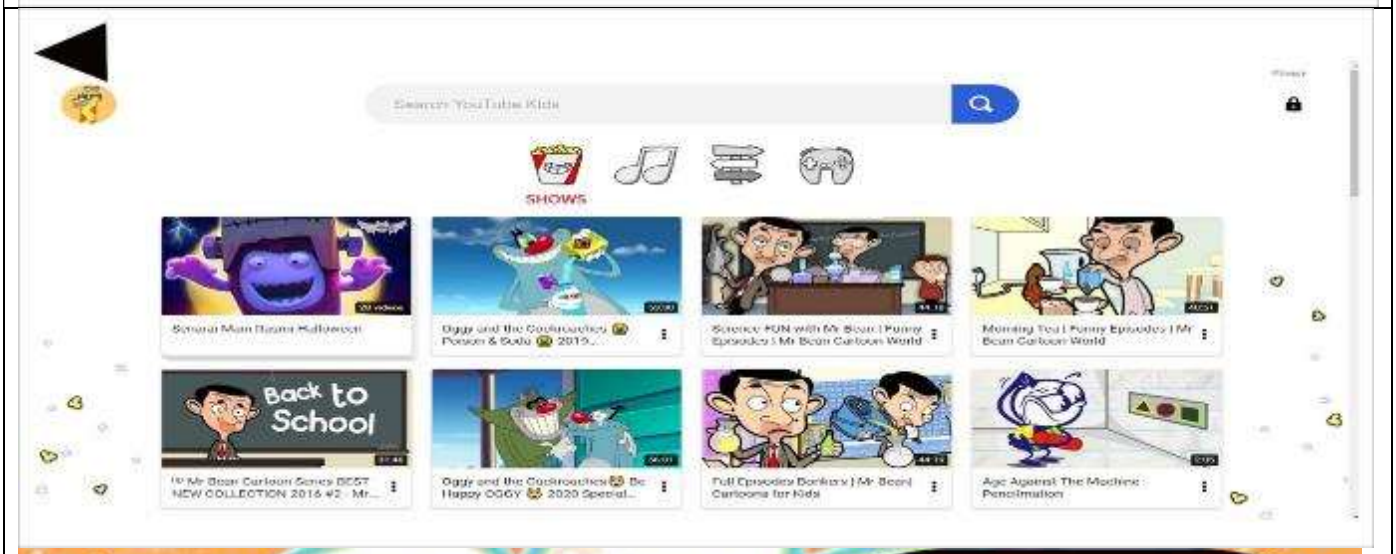
https://drive.google.com/file/d/11u3Cm_wbWZq46Z6H-wjz4fXWe3AsfiEJ/view?usp=sharing

WELCOME TO KI-P HOME
EDUCATION
GAMES
YOUTUBE KIDS
KIDS GOOGLE

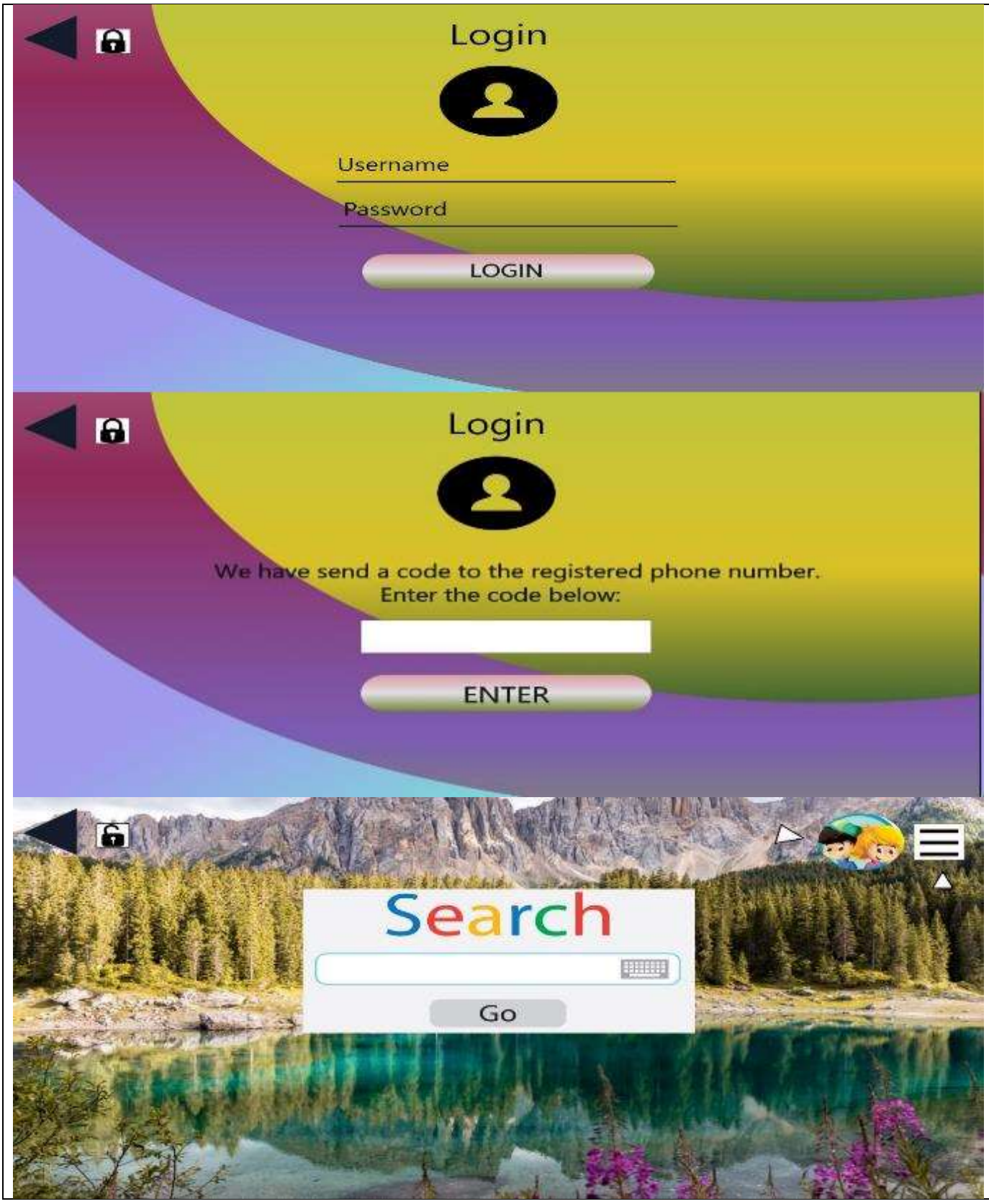
KIDS
Google
Google Search
I'm Feeling Lucky
Google offered in: Melayu



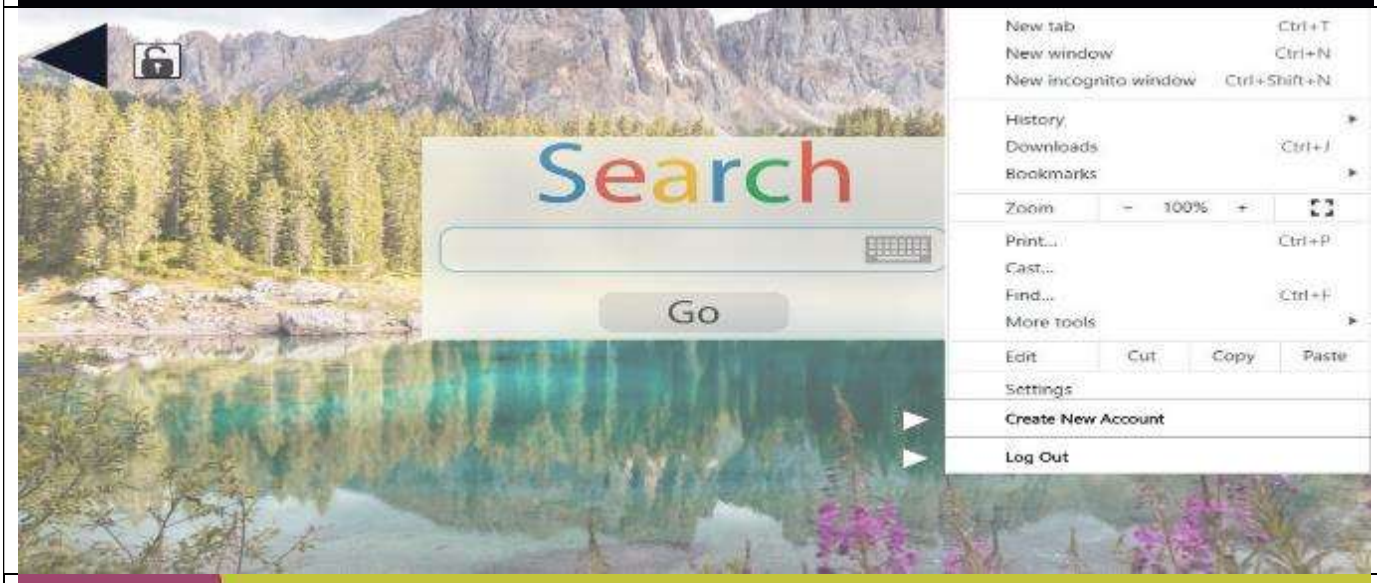



SHOWS
Back to School

WELCOME TO KI-P H
EDUCATION
EDUCATION
GAMES
Enter Parental Control


Login
Username
Password
LOGIN
Login
We have send a code to the registered phone number.
Enter the code below:
ENTER
Search
Go

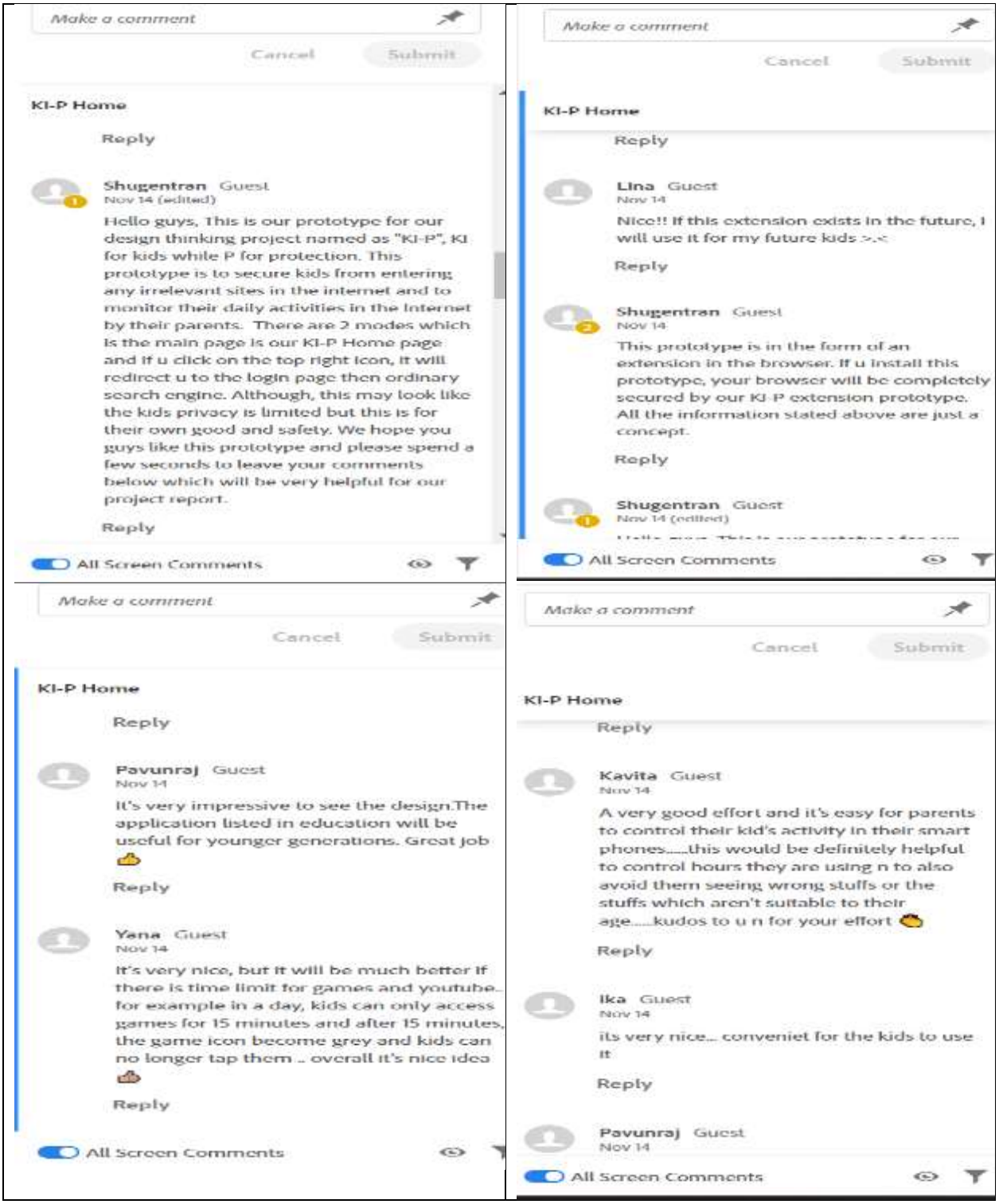
KI-P Home Status report
Allowed Content
Daily usage
14/11/2020
6 hours 13 min
3 hours 20 min
1 hour 30 min
1 hour 17 min
30 min
30 min
20 min
Sites
13 sites
Downloaded file
0 file

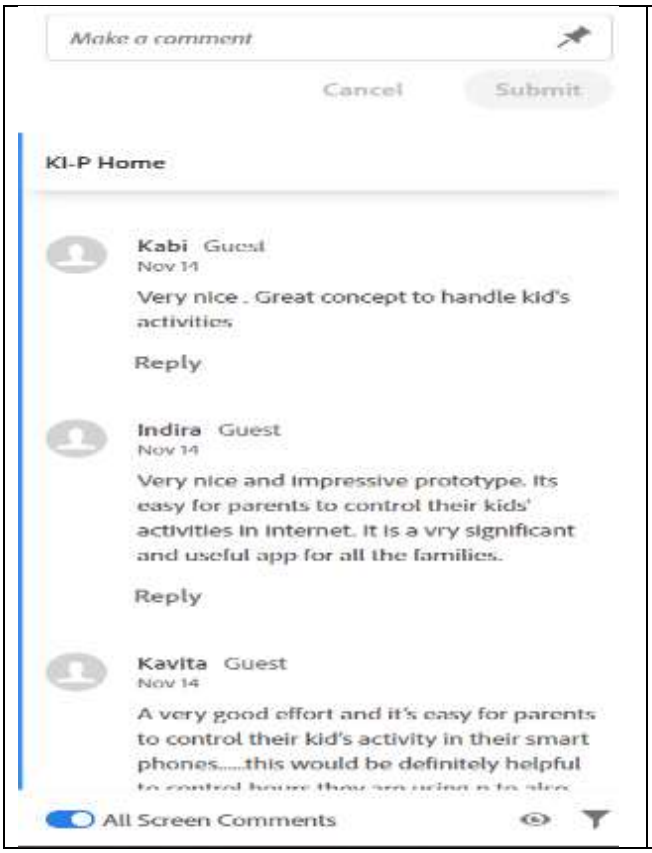

Search
Go
New tab Ctrl+T
New window Ctrl+N
New incognito window Ctrl+Shift+N
History
Downloads Ctrl+J
Bookmarks
Zoom - 100% +
Print... Ctrl+P
Cast...
Find... Ctrl+F
More tools
Edit Cut Copy Paste
Settings
Create New Account
Log Out

Sign Up
Username
Email
Phone Number
Password
Confirm Password
SIGN UP

v. Test

We have tested the prototype to the users and these are the comments from users.





REFLECTIONS

MUQRISYA

My dream regarding to my program right now is to gain deeper understanding in Technology and Information System, also about computer system. I believe this can help me in my daily life if i ever had to overcome problems about computer system and all. This design thinking has impact some on my dream as I know more in developing a web application or a web server. I did not expect I would know how to design a prototype in this early age by following this design thinking process. There will be several improvements I have to make to improve my potential in this industry which one of them is to polish my communication skills as I am a shy person and it will undermines the confidence of other people when engaging with me.

SHUGENTRAN

My goal regarding this course Technology and Information system is to obtain the fundamental knowledge of the Technology and Information system and hardware and software of the computer and also to learn more in detail about daily life information system application. This design thinking project impacted my goal through making myself understand more about the Internet and the web which is part of the technology and information system. This project also increased my soft skill and hard skill through communication and development of the prototype via usage of various software. I too need to obtain more knowledge in the other parts of information and technology system other than internet and web so that I have a wide understanding and increase my potential in the IT industry.

FAIZUL HAZWAN BIN ZULKEPLE

The goal for me when I entered the Technology and Information System program is to learn how technology and information systems plays a part in our world and also how it works. This is important for me who are in the networks and security course where technology and information is the fundamental knowledge that we need to know. From this project, it gave me a lot of exposure to this topic and also on how to successfully run a project. It not only gives me more motivation to learn more but also gives me more confidence to do many more projects in the future. In order for me to achieve my goal, I still need to improve myself in several aspects and one of them is having more confidence. This is an important aspect that a person should have when doing group works since it greatly affects the delivery of the information to other people.

IRSYAD ROS BIN HISYAM ROS

What I aim to accomplish in this Technology and Information Systems course is to grasp understanding of computer systems & how it all works together. During this Design Thinking Process, I have had the chance to interact with others outside my friend group and develop better communication skills as well as gain some confidence in myself more. I also had the pleasure to exchange thoughts and opinions with my fellow team members in brain storming session. I know that these experiences are essential in shaping me to be a better person and help me in other subjects of education as well.

DESIGN THINKING PROCESS VIDEO

Here is the link of our Design Thinking Process Video that summarize everything we have worked on for the design thinking challenge.

https://youtu.be/Z5njSjtIxfc