

Chapter– 14

FRONTEND DEVELOPMENT

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First of all After my basic Training in frontend languages, I was assigned to the Ncap team (Ncap is developed by NIIT) in which I have to first of all understand the product. For this I have to install softwares in my machine like nodejs, sql workbench and svn. With the help of my colleagues I have installed it on my machine so that I can add settings and make changes to it in my local machine using vscode and upload the updated code to svn server.

Then I was assigned to a different project which was an open source whiteboard project. For this first if all i started building basic bots using amazon lex and i have to research. So I started digging a bit online and after doing lots of research I found the correct github Repository and after setting it, I started working on it.

Then I was assigned to an AI voice based video simulator project. I started working on this with guidance from my mentor. For these i have done R & D ON html canvas and how to add videos using it and also i started learning more about aws lex platform and how to connect it to frontend Projects.

Then after making this successful prototype/demo of this voice based video Training simulator i started working on conversational chatbot along with my digifest Project. For both of this to work I started

learning python and after doing research on github and on google I found out a couple of open source modules to work on it and made a working poc of ai assistant.

Design/Programming/Implementation

I was part of many small projects and Research and development work in the company. So let's talk about all Programming stuff -

For almost one week in starting I was given training along with other interns about the ux/ux of web design and different tools (ex. wordPress, Figma). Then after this we were asked to do assignments on ui/ux in which i have designed a couple of pages like this -



Fig 1



Fig 2



Fig 3

After that we are given training in fronted languages like - Html, CSS , JavaScript and JQuery for a couple of days to understand all the basics of these fundamental languages.

After that we all interns have been assigned different assignments on the basis of this training in which i have made a bunch of functioning web pages using these languages. And after this i was also assigned certain frontend tasks Related to Ncap which is developed by the NIIT NEC team on which we can create a course / Storyboard, Proposal.

Also Ncap supports these features - Create Work Group/Share Course

Add/Align user to workgroup Create New Course

To Author/Edit Course Create Table of Content Patterns

Design Page by patterns Design page by Layouts Navigate Course

Track Changes features

Add Generic Comment for Screen

Add Widget Level (Text) Comments View downloaded package (1) View downloaded package (2)

Page Configuration More Options

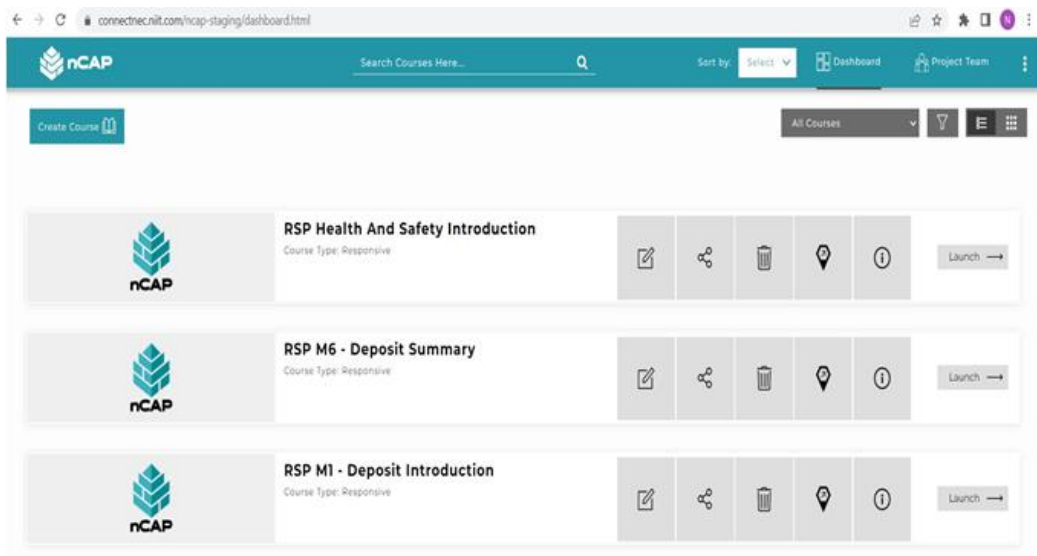


Fig 4

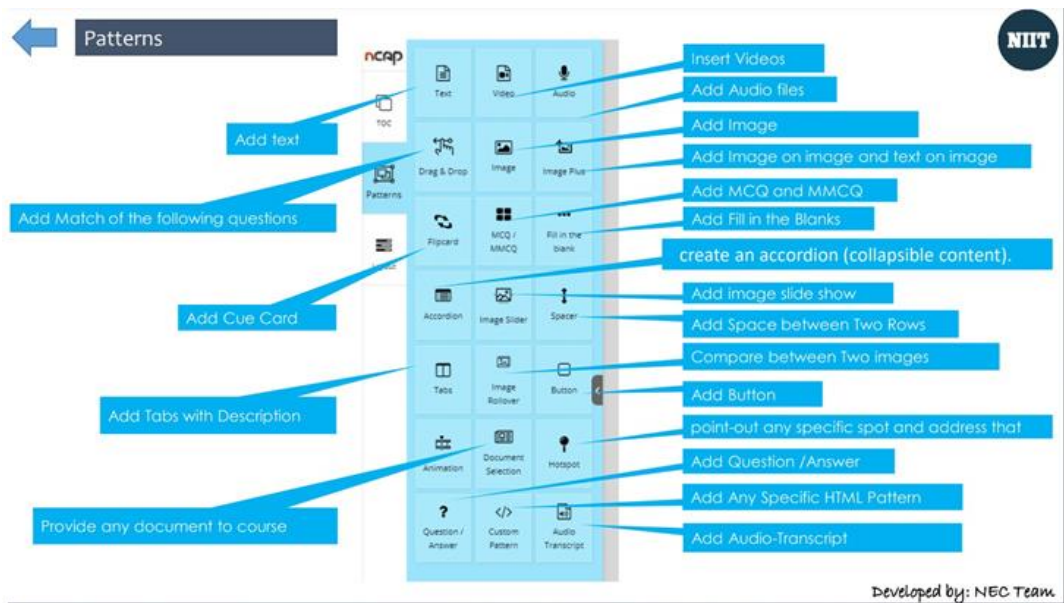


Fig 4

So in this i have to change settings of it in its project folder using html,css and jquery and after showing it to my mentor i have to take update from svn means i have to upload my updated code on svn server on daily basis after my task have been finished.

So also i give daily end of day status to my Technical spoc and buddy as per planning. And also fill the Thread sheet of whatever has been done on a daily basis including the work which I have done on Ncap widgets settings.

Which I need to do daily and tell updates to my team lead, so for almost all of my time I worked as a frontend developer. After that we were given Training on How to debug codes in browser and vscode. After that I was asked by my Technical spoc to do Research and Development regarding an open source collaborative whiteboard, so that multiple developers can discuss project ideas. So I started digging a bit online and after doing lots of research I found the correct github Repository and after setting it, I started working on it.

For this i have used html, css for styling and javascript for handling it. So since I found it on github first of all I started reviewing the code and after reviewing and understanding the code I started adding a couple of changes to it. For example - Project requirement was to add Zoom in and zoom out functionality and to add transform functionality so that when multiple users upload any images on they can resize it, rotate it and do much more with it.

So I added this functionality along with a couple of changes in code which were not required. Since it uses svg tags of html, I have learnt it so that i can make changes to it.

So I worked on it for a couple of weeks to tweak its code in html,css and javascript and to add features which aws important for our company needs so that multiple developers can discuss ideas on it. After adding certain features to enhance user experience I showed the final output to my Mentor and he really liked it and we deployed it.

Here is the screenshot of that whiteboard project -

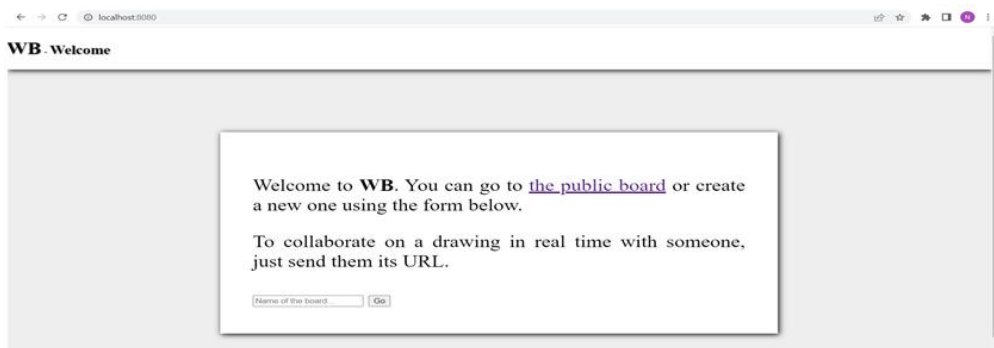


Fig 6

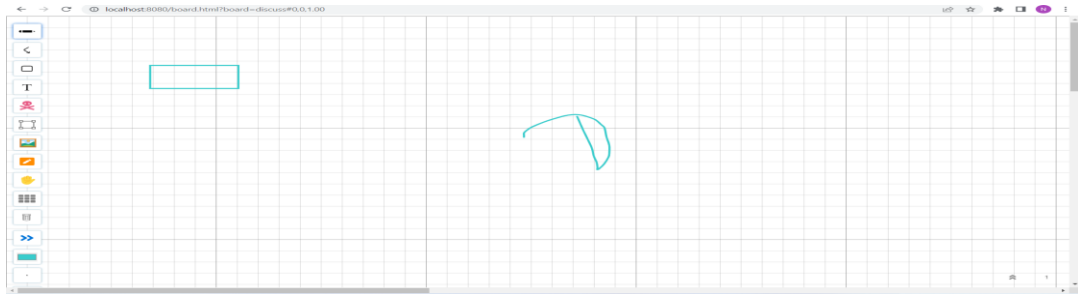


Fig 6

Then I was assigned to a Project team where we developed a 2 Voice based Training Video simulator POC (Proof of Concept) using Amazon lex along with html5, css and jquery as primary languages.

For this i have done Research and Development regarding Amazon lex and how to connect it with frontend Projects. So I have gone through a bunch of github repositories and finally made a prototype using Lex bot and integrated it. For this first of all I wrote down all necessary html tags and styles using css and then also I wrote a javascript file to create dynamic and interactive web content like applications and browsers. Then i have to connect it to aws lex platform so that on voice based command, it can load next videos according to the command said by user

For this i again have to do research so i went through a couple of articles and finally i found about how to add aws lex to frontend browsers.

So I added this javascript file called le-web-ui.js and made changes to it according to my project. And then I added intents to aws lex so that when a user will speak these intents on browser mic it will trigger these items and will load different training videos in sequence manner. So this project was difficult for me to programme it in frontend and also to implement it according to the poc requirement.

After that I was assigned for an AI related task and was asked to build a conversational nlp (natural language processing) bot using python/node js and connect it to the frontend Browser using javascript.

So I have worked on that project and made a browser based conversational chatbot prototype which can listen to whatever you say and can respond to the appropriate patterns.

So for this first of all i started working on it with python.

For that i created one index.py file in which i used couple of open source python modules along with tensorflow and for training data image used one intense.json file in which i have defined the patterns and responses of chatbot and using python library

tensorflow and neural networks i trained my mode on this data, let's talk about neural networks and tensorflow -

Also I installed flask to make the backend of it so that we can call these functions once a certain endpoint is hit using the frontend.

Then i started writing the front end using javascript and style it using css and html. And when the user will speak any already trained pattern or similar texts, conversational bot will give responses according to the texts spoken by the user.

Right now we are trying to integrate it with our existing projects and courses and fulfill our client's requirements.

CONCLUSION

It helped me to learn lots of technologies so that I can adapt to new environments and fulfill my organization's needs whenever they require certain skills to achieve different tasks and clients requirements. I learnt about teamwork and how to be helpful each-other if any of us get stuck in any situation and also how to solve problems in a more effective manner without taking much more time. I also learnt how to complete your work in timelines so that we can satisfy our managers and can be part of our organization's success

I am now a great developer and I am also learning different technologies as competition becomes more and more intense to secure my place in this technical world full of very smart people building great products and services.