



Indian Institute of
Technology
Roorkee

Internship Report

Worked on Monolith an advanced Printer Software Application
(Backend Development & UI Development)

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Abstract-:

Monolith advanced Printer Software will perform the basic operations which every printer software performs but Monolith will performs advanced operations like Multi-Layer-Printing and Crop-Marks and Tiling like many features along with all basic features like print size ,General properties of Job, Color Management of Job and Step and Repeat of job.

It allows the user to add up to five Printers and Five Cutters at a time. User can performs the operation on all printers and Cutters by using this software. It will save the settings that user have applied on the previous job as Preset and can be applied on other jobs tom save the time.

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About Company-:

VirSoftech is a Software Development Company which is founded by IIT Kharagpur alumnus. VirSoftech currently working in two countries India and Japan. The company works in domain of Software development.

It works on Own Software product like **eVal OMR Software**, Indian Government Project like **Abhilekh-Patal** (Portal for Access to Archives and Learning) and other MNC like Muthoh company projects ONYX software which is installed in printer ValueJet Series.

The product Like Mutoh Company Printer Software Monolith which is an advanced printer software which is installed in ValueJet (VJ) Series.

Tools Used-:

Perforce P4V- For Version Control

ASP.NET and WPF-For UI design

C# and XAML (eXtensible Application Markup Language)-Programming Languages

Adobe Illustrator- For Icon Designing

Visual Studio 2017- Editor for programming behavioural scripts

About Project-:

Monolith Software is the product of Mutoh Company which basically makes the hardware of the printers and makes the software for these from other companies like VirSoftech.

Monolith advanced Printer Software will perform the basic operations which every printer software performs but Monolith will performs advanced operations like Multi-Layer-Printing and Crop-Marks and Tiling like many features along with all basic features like print size ,General properties of Job, Color Management of Job and Step and Repeat of job.

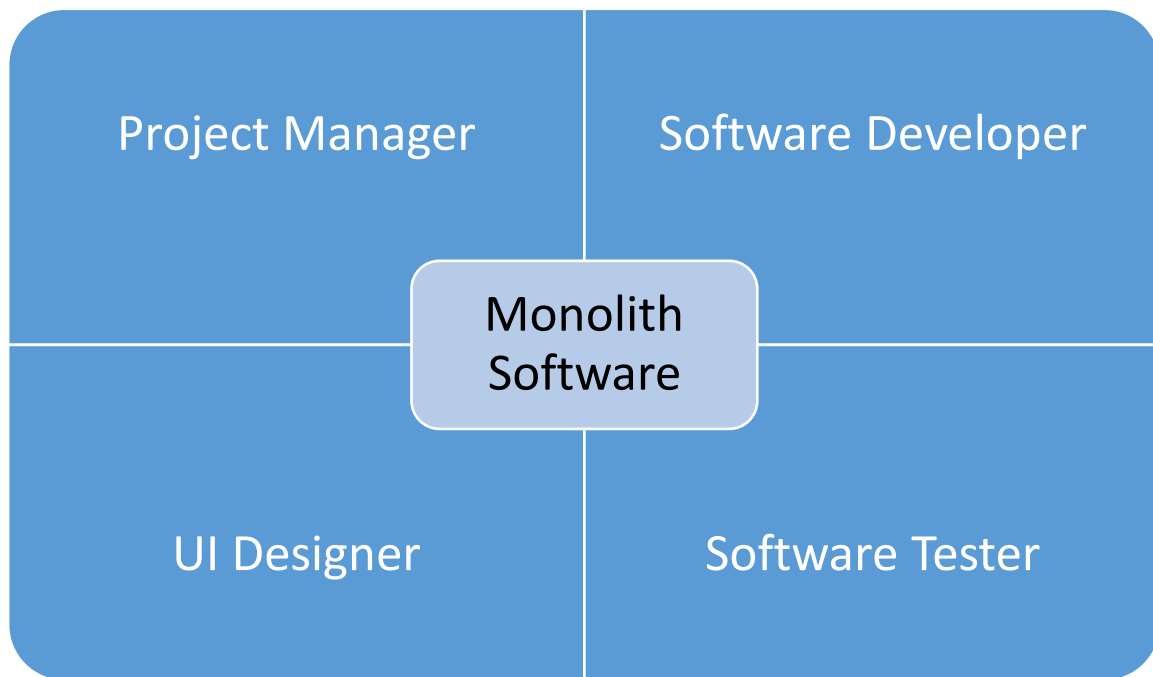
It allows the user to add up to five Printers and Five Cutters at a time. User can performs the operation on all printers and Cutters by using this software. It will save the settings that user have applied on the previous job as Preset and can be applied on other jobs tom save the time.

It will also show the cost of the printing for every job and approximate time of the completion of the job. It will also show the job printed today and ink used today on the Dashboard where it will show the printers connected and ink in every printer and show the warning for the as the ink in any printer will end.

It will also calculate the media wastage and show the way to how to print the job to reduce the media wastage of big size job.

About my Role-:

The team of the Software development was part of a hierarchy described by the following diagram:

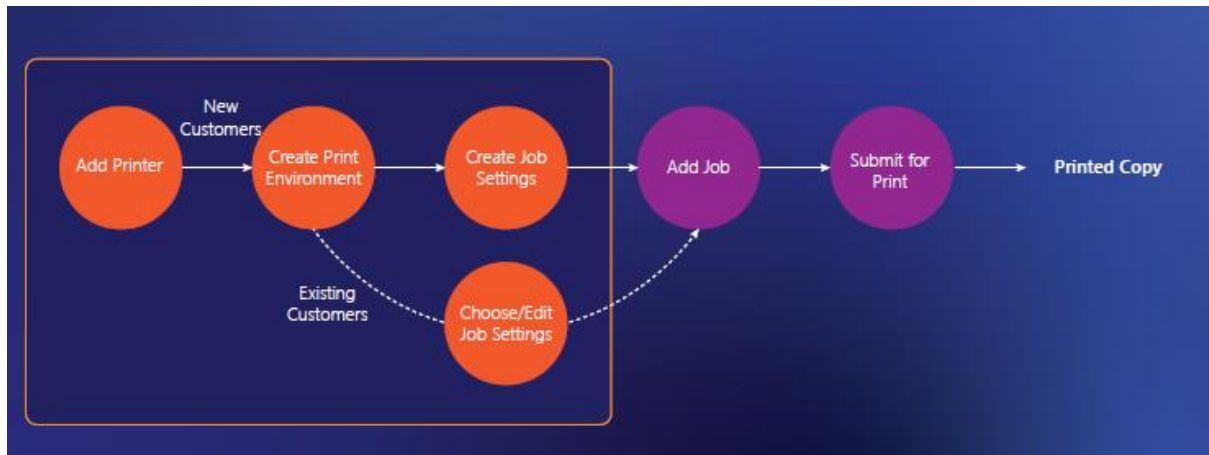


I have worked as a Software developer in this project for 75 days. I have worked on the Application Backend as well as the User Interface (UI) of software. I have used the C#, XAML, WPF and P4V for this software development.

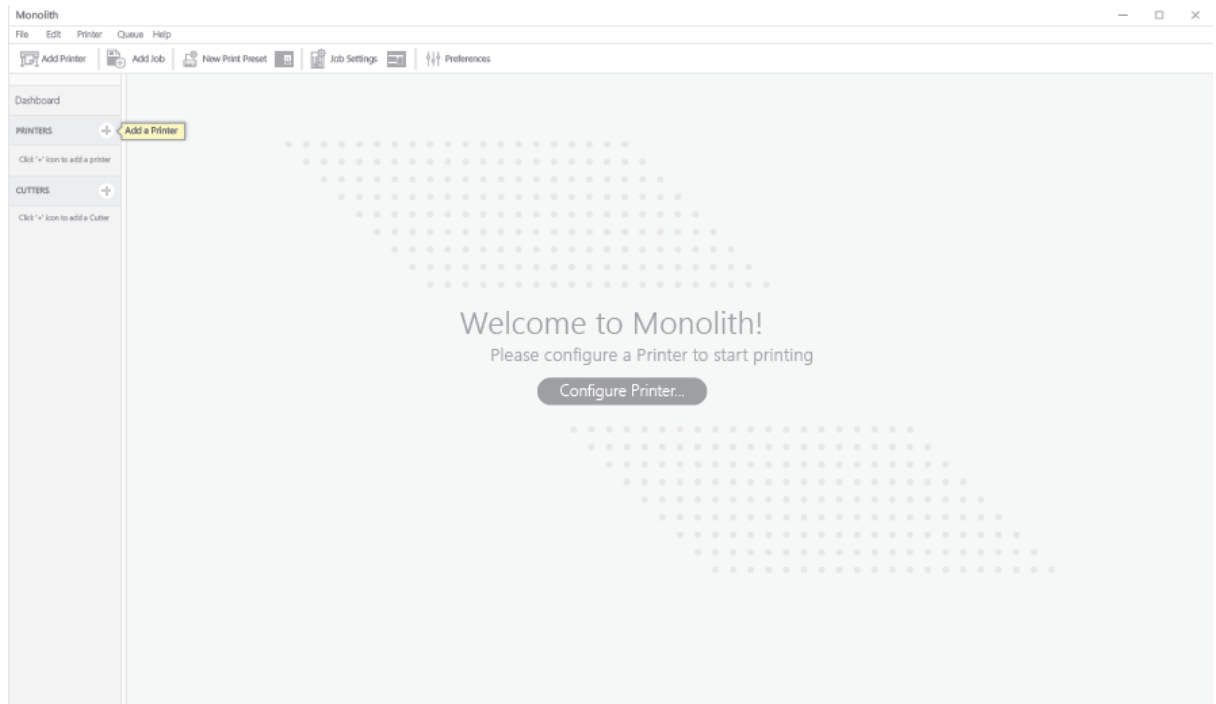
On completion of a task it is first tested by tester for finding out the bugs and after correcting the bugs, it is approved by the Project Manager. After approval, the developed feature would be merged with the master build in the project repository, tagged with appropriate version and then it would be deployed in the market place of respective platforms.

About my Work:-

I have worked as the Software Developer responsible for the development of the Dashboard, Add Printer and Edit Job Settings of the Monolith Software. Under this Designation, I had worked on the following things:-



1. Home Page for the new Users which are using it first it looks like something that I have built-



2. If user want to add a new printer, then it will have fill the following information and also have to select the model of printer. User can also change the Hotfolder of the job and also set the different printing environment other than default:-

Monolith

File Edit Printer Queue Help

Add a Printer

1 Add Printer 2 Create Printer Environment 3 Choose/Create Job Settings 4 You are ready to print!

Printer IP Address : 192.08.1.121

Retrieve

Printer Nick Name : Alexa

Model Name : Mush-Velvet 162490X

Inkset : ChfKdLm

Serial Number : MH02190290

Ink Cost

Cyan : \$ 1.00 per 1000ml

Magenta : \$ 1.00 per 1000ml

Yellow : \$ 1.00 per 1000ml

Black : \$ 1.00 per 1000ml

White : \$ 1.00 per 1000ml

VamRht : \$ 1.00 per 1000ml

Light Cyan : \$ 1.00 per 1000ml

Light Magenta : \$ 1.00 per 1000ml

Next Cancel

Monolith

File Edit Printer Queue Help

Printer: Alexa > Print Environment

1 Add Printer 2 Create Printer Environment 3 Choose/Create Job Settings 4 You are ready to print!

Name : High Quality-Banner

Job Preset : Banner

New... Edit... Import...

Media : 100cm Roll

Resolution : 1024 X 768

Resolution : 300 dpi

Multi-Pass : 4

Tiling : No

Step & repeat : No

Scaling : No

Parameter 01 : nash

Parameter 02 : nash

Hot Folder : C:/Monolith/High-Quality-Banner

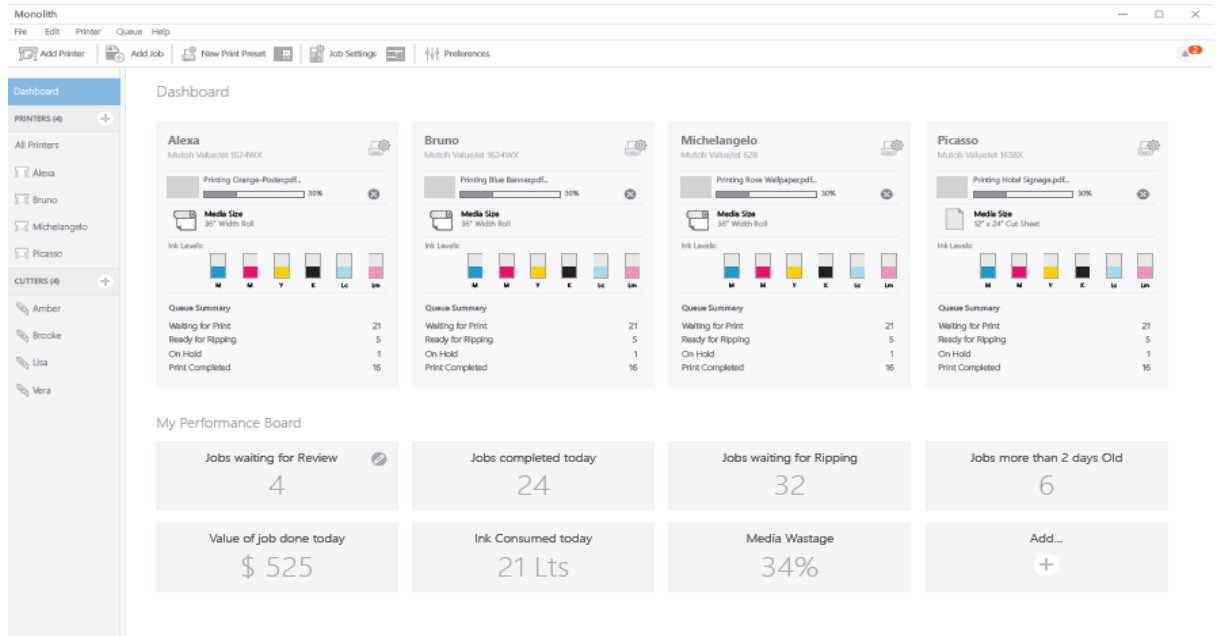
Browse...

160 cm

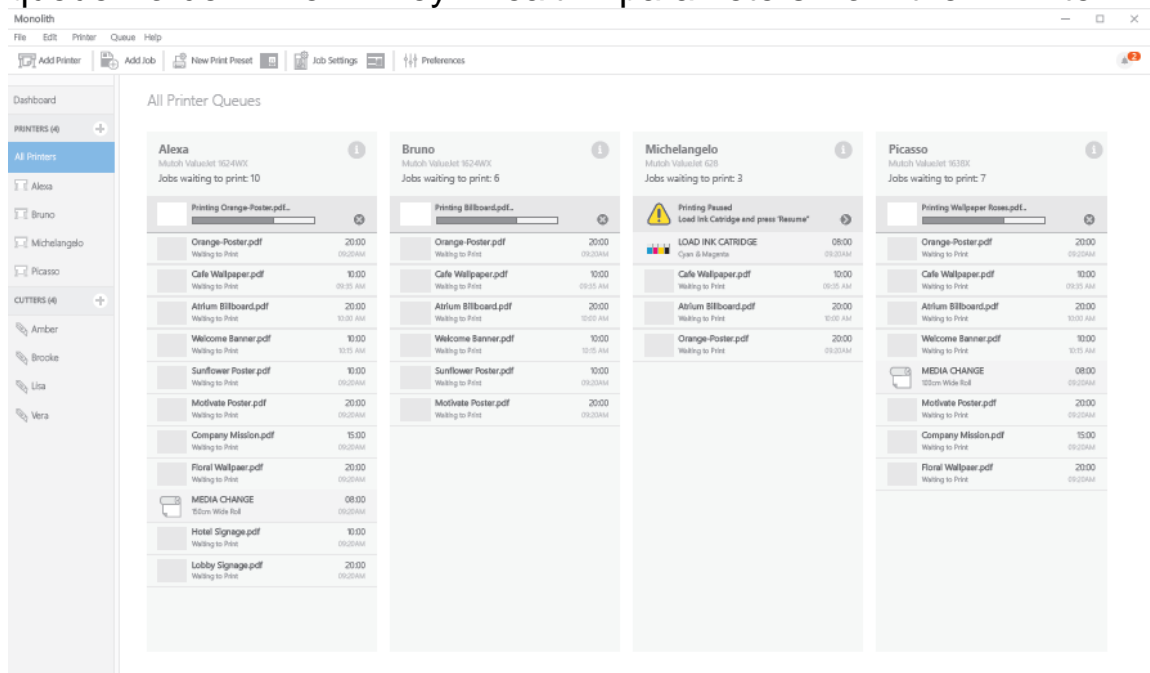
400%

Previous Save Cancel

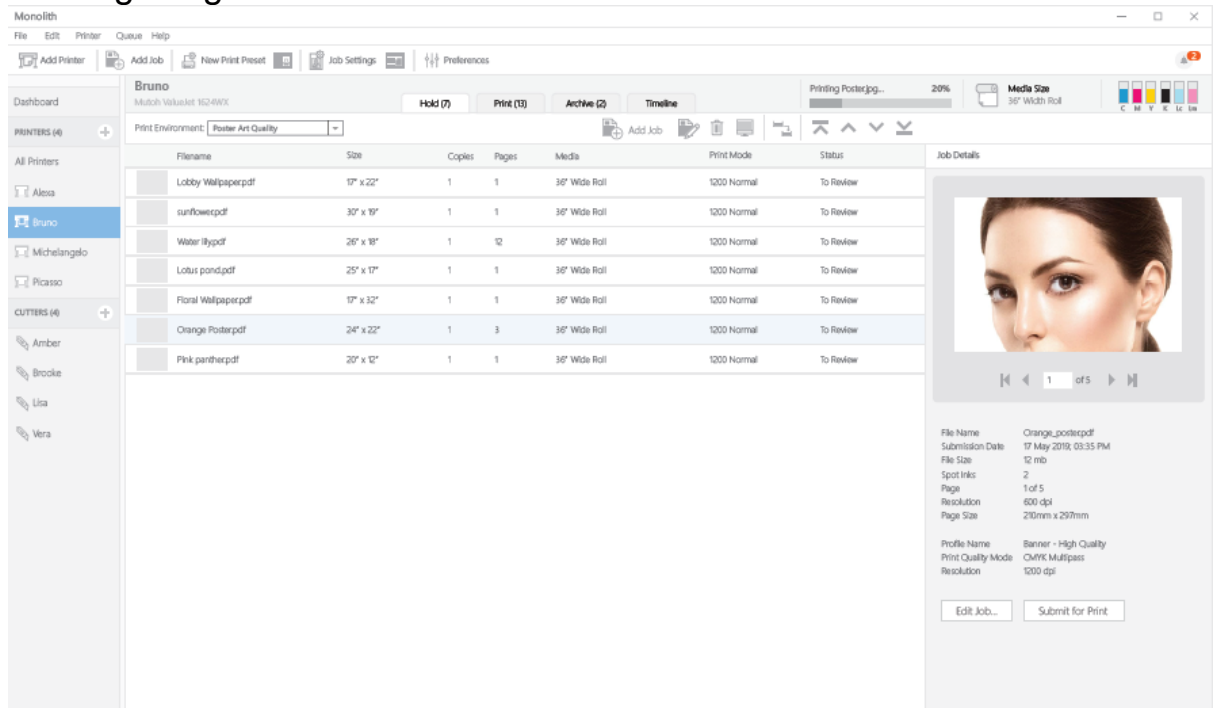
3. Dashboard will show the following things:- At all times, display current status of printers that are connected to Monolith. Show key health parameters of printer so that printers are operational at all times. Define and monitor key metrics that matters to business owner.



4. Printer Queue Dashboard will show following- One place to monitor all the four printer queues. Gives a heads up to operator about important events - Ink Loading, Media Change, etc. See the status of different jobs in the Print Queue. Gives a rough estimate about delivery time of the jobs. Can prioritize jobs by drag and drop in the queue order View Key health parameters of the Printer.



- Printer Queues will show for each printer following- Each Printer will display the 'Hold' queue and 'Print' queue information. Hold Queue shows - Jobs to Review, Job held for Operator Preview. Print Queue shows - Jobs to Rip, Ripping Progress, Jobs to Print, Printing Progress.



- Edit Job Settings- Edit All Job Related Settings. There are eleven types of settings that we have to apply on advanced printer software and eleven tabs are prepared like General Properties, Print Size, Color Management, Crop Marks, Tiling, Spot- Colors, Multi-Layer, Step & Repeat and Summary of the Job.

