



Model Driven Software Engineering

COEN-6312

Instructor: Dr. Wahab Hamou-Lhadj

Topic: Hospital Management system

Deliverable 5 (Automted Code Generation)

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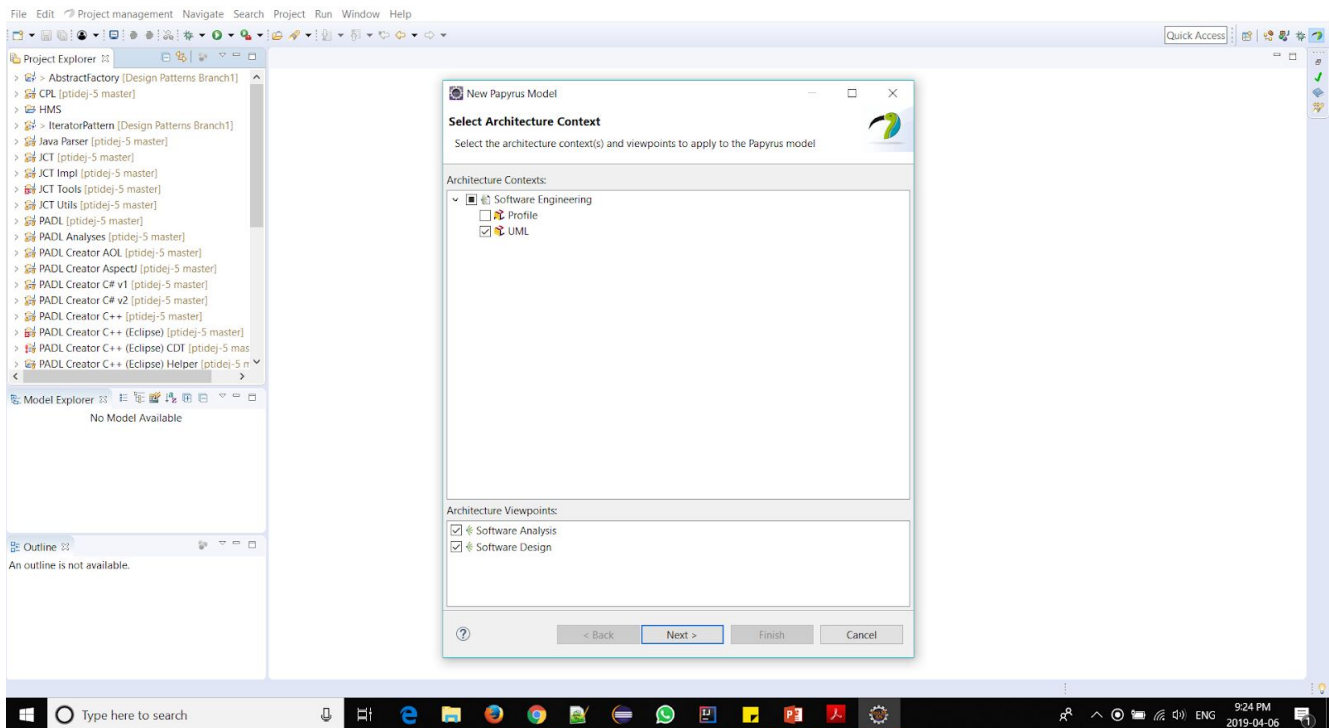
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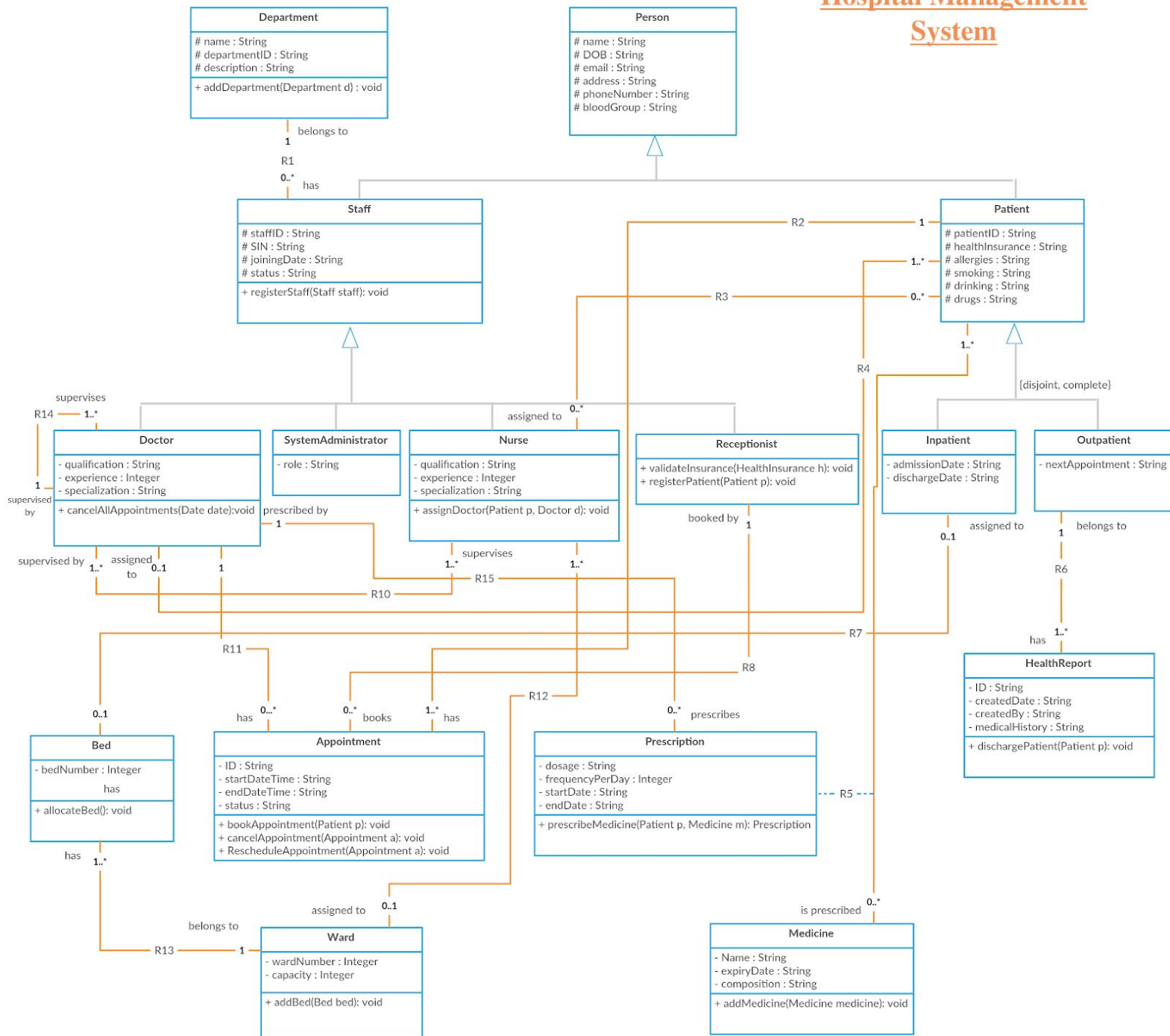
1. Code generation using Papyrus

- Create an empty java project. Right click on the java project to select New -> Other and select Papyrus model. Click next and in the pop up select UML.

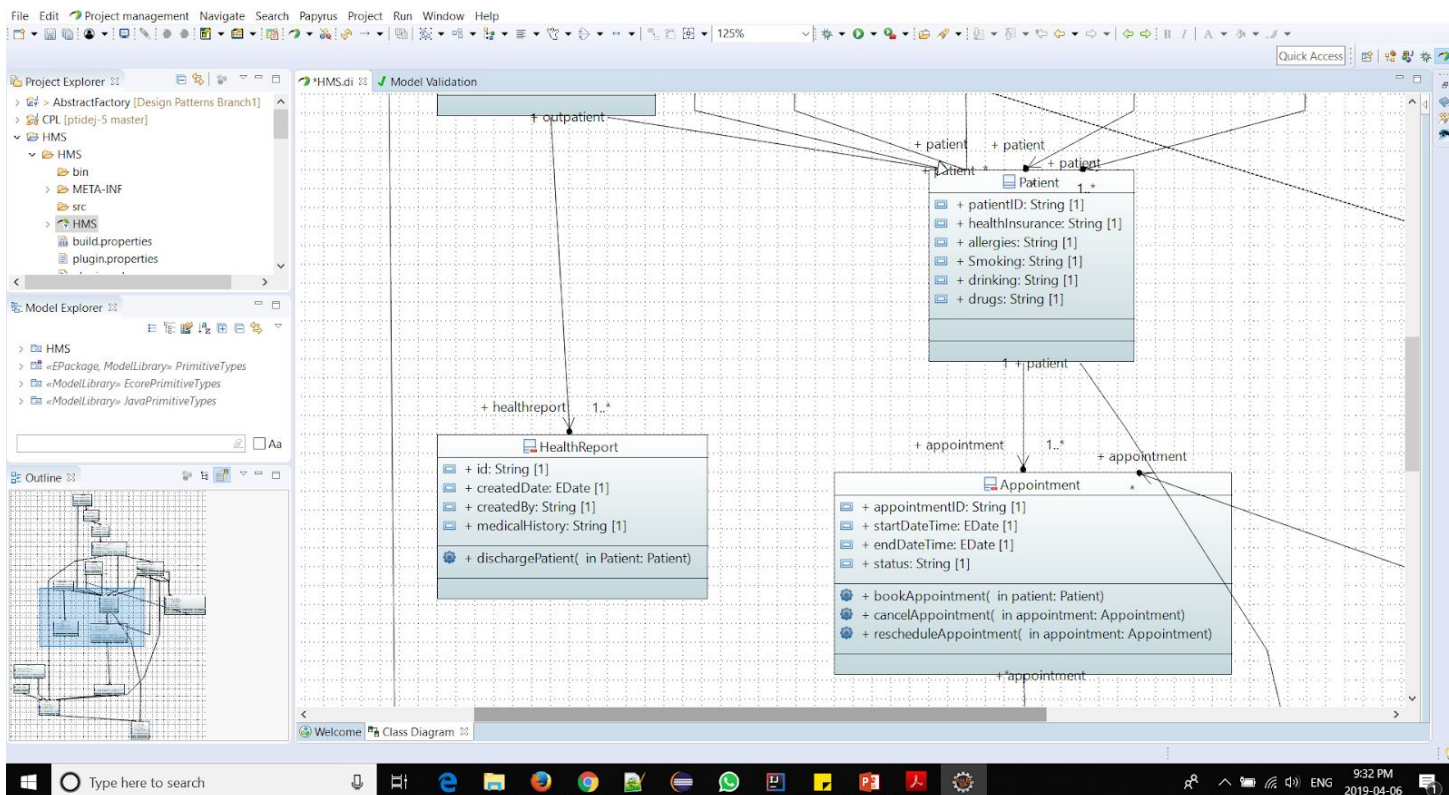


- Click next and select the project created above. Click next and select the class diagram option.
- Click finish and it will generate the Papyrus files in the project.
- Find the model.di file and change the perspective to Papyrus perspective also rename it to HMS.di
- Create the class diagram/attributes/associations according to the Hospital management system class diagram shown below

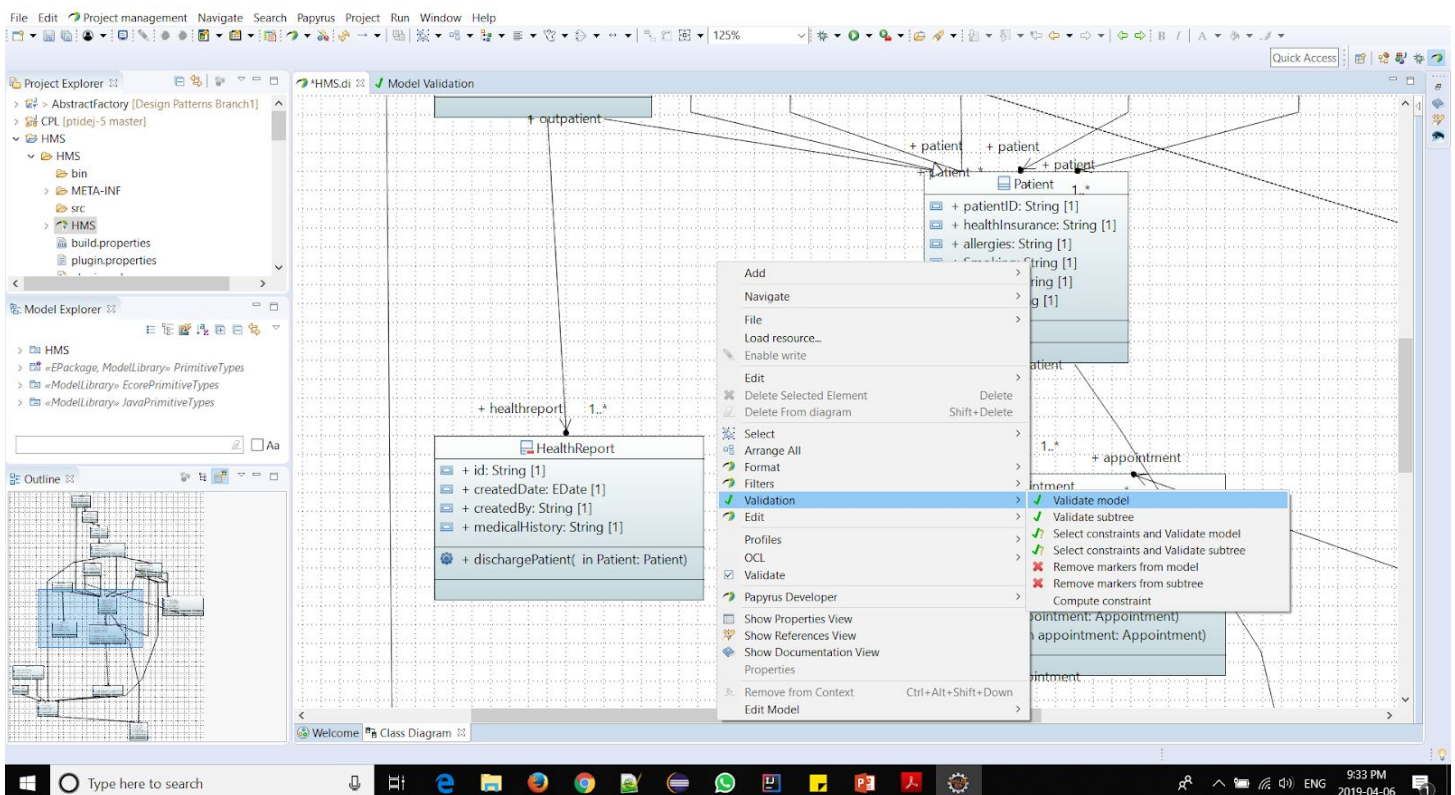
Hospital Management System

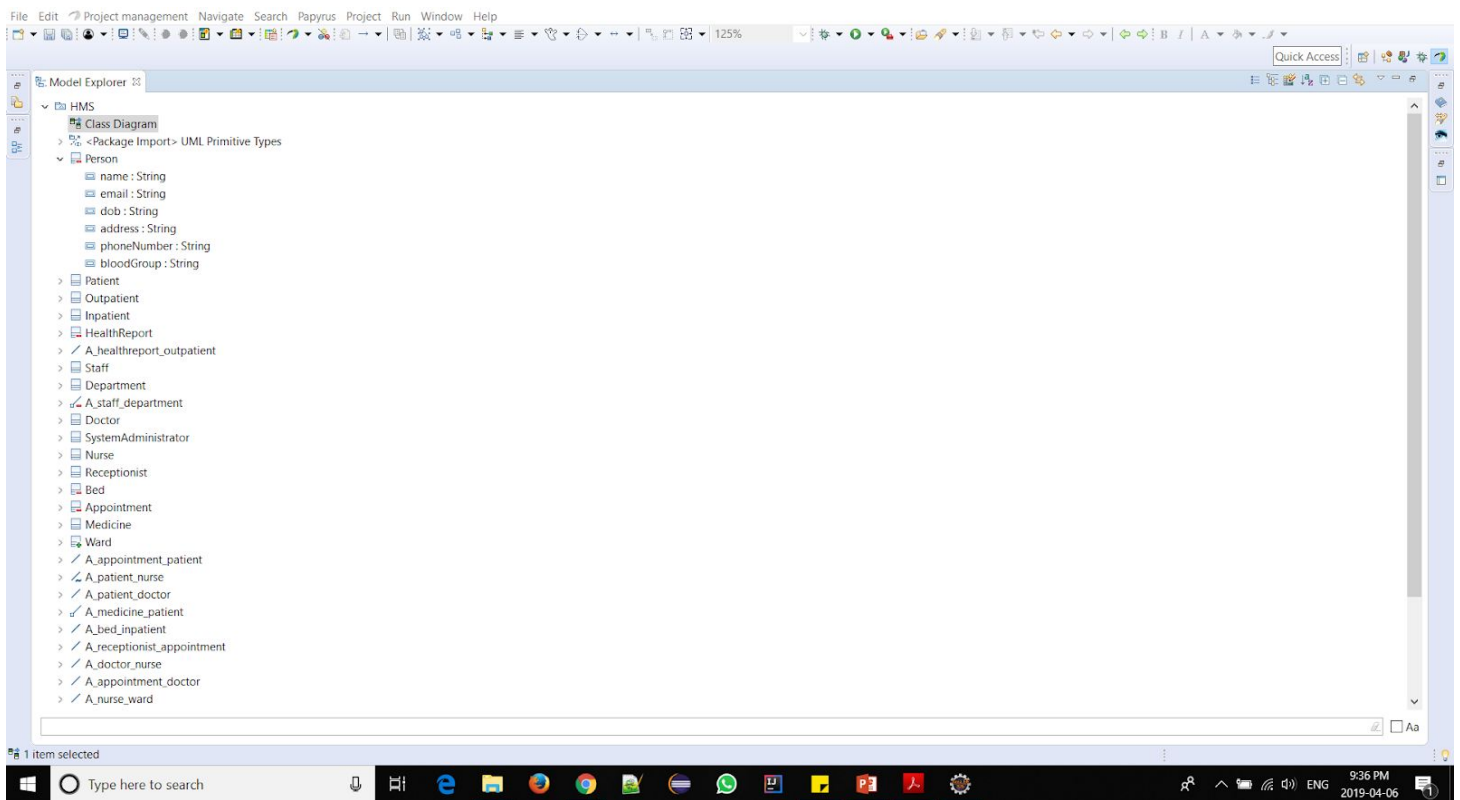


*Ctrl+Click on the class diagram for a better view

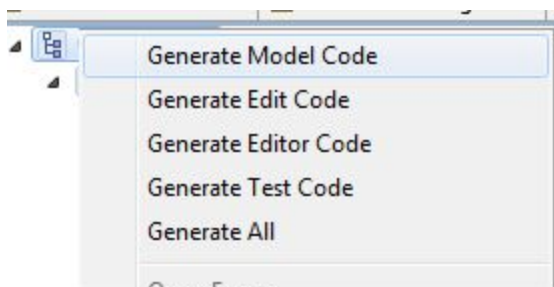


- We can import the primitive types of java and emf to use in the properties in the class diagram if needed
- Multiple functions are provided by Papyrus to validate the diagram to ensure we are doing it correctly as shown below

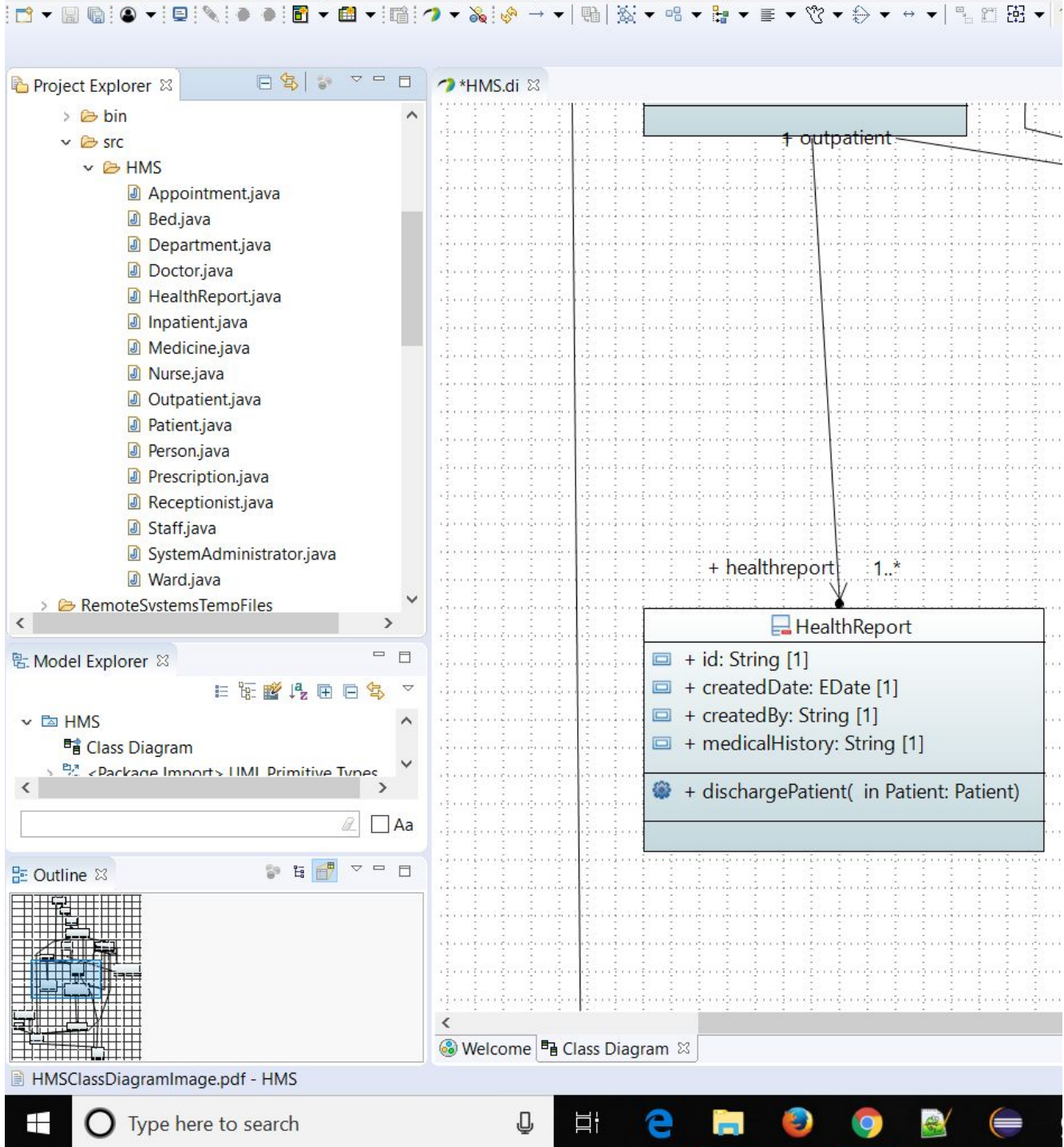




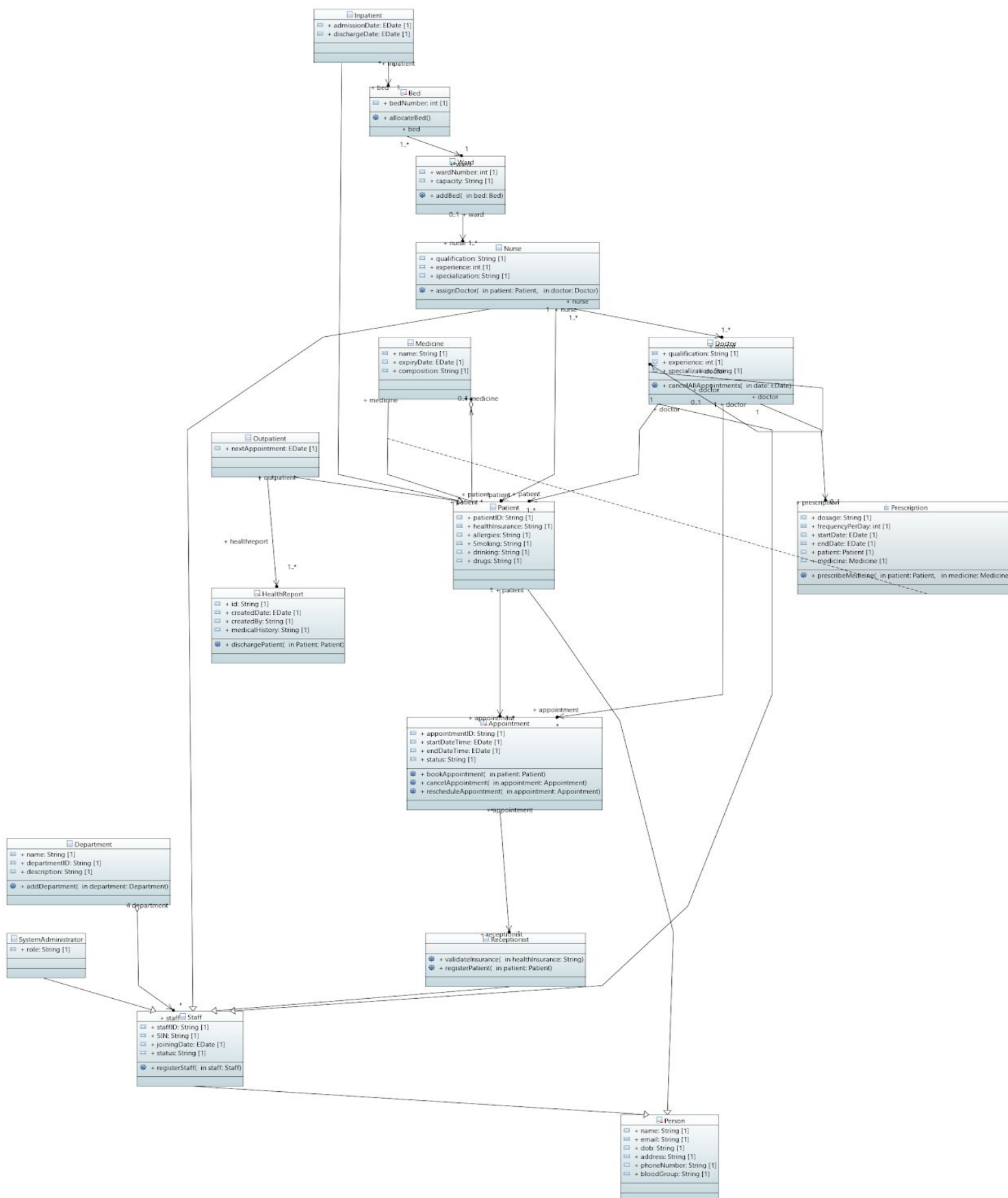
- Once the class diagram is completed we can generate the code by switching to plugin development perspective and click create new genmodel
 - Click and select the project and open “Create New Wizard”.
 - Select the EMF generator model and give a name.
 - Select UML model.
 - Select Model URI and the .uml file in the project and click next and finish
- Open the .genmodel created above and right click and select “Generate Model Code”



- If the UML diagram was built correctly it will generate the code as per the specification

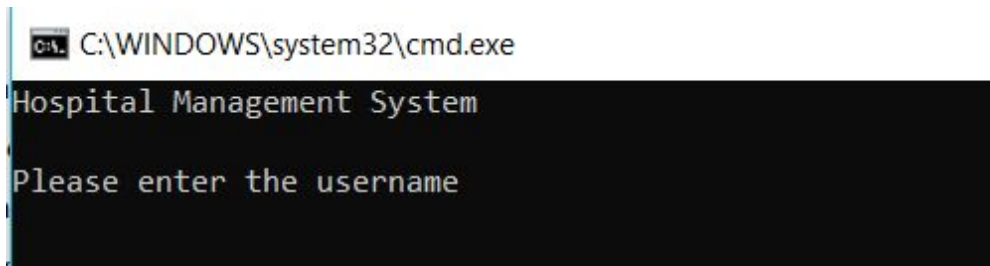
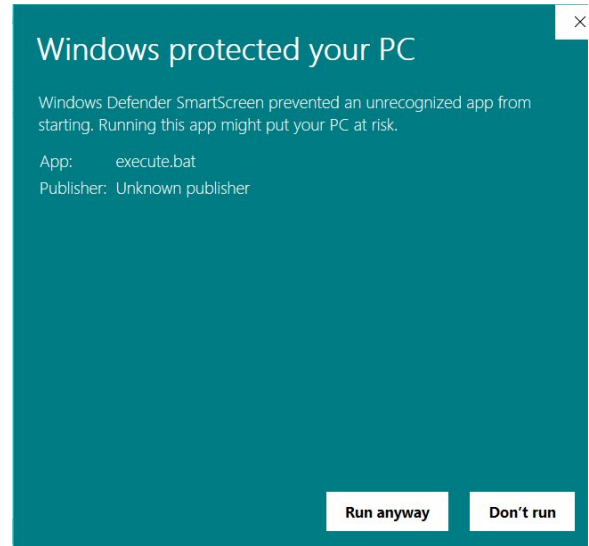


2. Class diagram in Papyrus



3. Application execution steps

- Download the project on the computer
- Navigate to “execute.bat” in HMS → src → Application → execute.bat
- Double click the file to open the cmd console
- In the pop up if you see a run button click on “Run” if not then click “More Info” and click “Run anyway” button)



- Enter any username and password
- Search for a patient from the available list/options
- The system would display the patient information

```
C:\WINDOWS\system32\cmd.exe
Hospital Management System

Please enter the username
admin
Please enter the password
admin@123
Please input the patient Id - Available options are 123, 526, 876, 356 as samples
123
Below is Patient Information

HealthInsurance - BlueCross
allergies - PeaNut
Smoking - Yes
drinking - No
drugs - No
Press any key to continue . . .
```

- If Patient is not present in the database then a message “No Patient found with the requested Id. Please close the application and try again”

```
C:\WINDOWS\system32\cmd.exe
Hospital Management System

Please enter the username
admin
Please enter the password
admin@123
Please input the patient Id - Available options are 123, 526, 876, 356 as samples
543
No Patient found with the requested ID. Please close the application and try again.
Press any key to continue . . .
```

4. Contribution Table

	Papyrus Set Up	Class Diagram Creation	Automated Code Generation
Nikhil Vijayan	√	√	√
Rakshitha Ramachandra	√	√	√
Debanjana Bhattacharyya	√	√	√
Dhruv Bhalodi	√	√	√
Jasmine Kalra	√	√	√

GitHub: <https://github.com/jas07061002/COEN6312>

Reference:<https://milanardeshana.wordpress.com/2016/03/16/how-to-install-papyrus-and-generate-java-code-in-eclipse-mars-2/>