

QUESTIFY

Website for OOSD Learning

The image shows a screenshot of the Questify website. On the left, the homepage features a dark header with the Questify logo and "THE UNIVERSITY OF MELBOURNE". Below the header, the title "Welcome to OOSD Questify" is displayed in large white font, followed by a subtitle "collaborative learning platform where students create, share, and evaluate OOSD questions together". Four main sections are listed: "Create Questions" (Design questions on OOSD topics. Writing explanations helps you understand concepts better.), "Answer & Discuss" (Try questions from classmates, compare answers, and join discussions about different approaches.), "Learn Together" (Rate & save questions, track your progress, and build your understanding through peer collaboration.), and "AI Assistant" (Get instant help with built-in AI chatbot and receive AI-generated explanations alongside peer answers.). A quote at the bottom reads: ""Tell me and I forget, teach me and I may remember, involve me and I learn." — Xunzi (ancient Chinese philosopher)". On the right, a sign-in form is shown with fields for "EMAIL ADDRESS" and "PASSWORD", a "Sign In" button, and links for "Create New Account" and "Forgot your password?".

Presented By : **Team 56**

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see what they want

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collaborate and technology
used in the project

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Meet Our Team



Chen Ma
**Product Owner /
Frontend Developer**



Chih-Yi Huang
**Scrum Master /
Backend Developer**



Cheolgyun (Bill) Park
**Testing Lead /
Backend Developer**



Chang (Jerry) Chang
Frontend Lead



Ziyi Zhang
Backend Lead



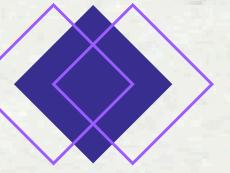
Our Clients



Professor Shanika



Students



Project Brief



I designed this subject back in the early 2000s.



But the world has changed with the rise of AI,
modern tools, and new learning habits.



I want to redesign this subject to make learning
interactive, engaging and AI-empowered.



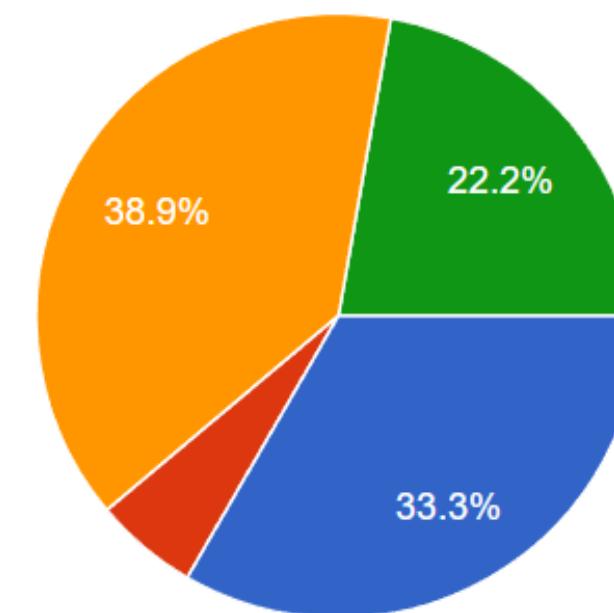
We want infinite OOSD questions for practice and AI tutors !



Looking back on this course, if you could choose one of the options below, which would have made the course better for you? (Select one)

18 responses

[Copy chart](#)



- Interactive Learning Website - Includes: Lecture Summary+ AI Tutor + Unlimited Quizzes
- Platform for all students to upload questions, and later on good questions are turned into quizzes
- Question bank related to Object Oriented Programming - Unlimited Quiz Generator
- Other...



I want something that keeps students engaged,
makes learning interactive, and deepens
understanding week by week.

So, we create **Questify**

Questify is a peer-assisted collaborative learning platform. Instead of passively answering questions, students create, evaluate, and discuss their own questions here. Learning become an active, collaborative, and AI-enhanced experience.

Core Features

Question

filter, sort
questions
(week,
topic etc)

create
questions(M
CQ/SAQ)

AI
explanation

personalized
profile

Admin

view user
activities

rankings
based on
activity

Engagement

comment
, like, rate
questions

Technical Excellence



Performance & Reliability

- Question creation handles AI timeouts
- AI call metadata is logged (model, prompt hash, latency) for troubleshooting (AIRequestLog)



User Experience

- Simple, minimal, and lightweight design
- Forms surface inline validation/errors (e.g., registration, comments) so users get immediate feedback
- The system tracks attempts and ratings



Security & Privacy

- Session-based authentication with CSRF protection is enforced for question creation, attempts, comments, and ratings
- HTTPS and secret management handled by Render deployment configuration

(Demo shown next)

Demo Showcase

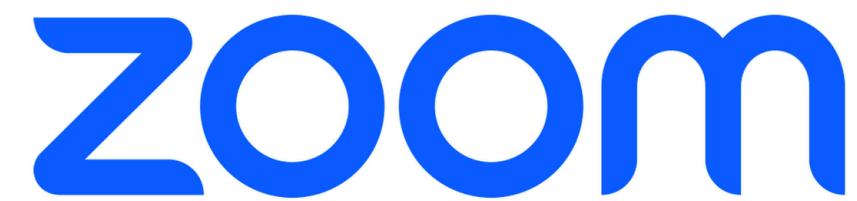
The screenshot shows a web browser window titled "COMP30022_IT_Project_Team56_OOSD_Questify_Demo". The page is titled "Question List" and displays a list of questions. A red circle with the Chinese character "畅" (Chang) is overlaid on the top-left corner of the browser window. The questions listed include:

- What is the Java basics?
- Explain how code readers improve checked code?
- What is the difference between an interface and an abstract class in Java?
- Describe the difference between inheritance and polymorphism.
- Explain what happens when you call a method with the same name as another method in the same class.
- What is the difference between String and StringBuilder in Java?
- What role do constructors play in classes?
- Why is encapsulation important in OOSD?
- Explain the concept of a class in object-oriented programming.
- What are the eight primitive data types in Java?
- Which feature enables parallel processing of data collections in Java?

Each question has a "Rating" (0.0) and "Total Attempts" (0) indicator. The interface includes a "Filter" button, a dropdown menu set to "Highest rating", and search filters for "Week1", "MCQ", "JAVA basics", "Not Verified", "Week2", "SHORT", "Advanced Java", "Not Verified", "Week10", "SHORT", "Exceptions", "Not Verified", "Week9", "SHORT", "Design Patterns", "Not Verified", "Week8", "SHORT", "Inheritance", "Verified", "Week11", "SHORT", "Polymorphism", "Not Verified", "Week5", "SHORT", "Inheritance and Polymorphism", "Not Verified", "Week3", "SHORT", "Inheritance and Polymorphism", "Not Verified", "Week6", "SHORT", "Arrays and Strings", "Not Verified", "Week2", "SHORT", "Classes and Objects", "Not Verified", "Week2", "SHORT", "Classes and Objects", "Not Verified", "Week2", "SHORT", "Classes and Objects", "Not Verified", "Week1", "SHORT", "JAVA basics", "Not Verified", and "Week12", "MCQ", "Advanced Java", "Not Verified". There is also a "Copy link" button in the top right corner.

At the bottom left, there is a "Watch on YouTube" button.

Technologies Used for Communication



Meetings



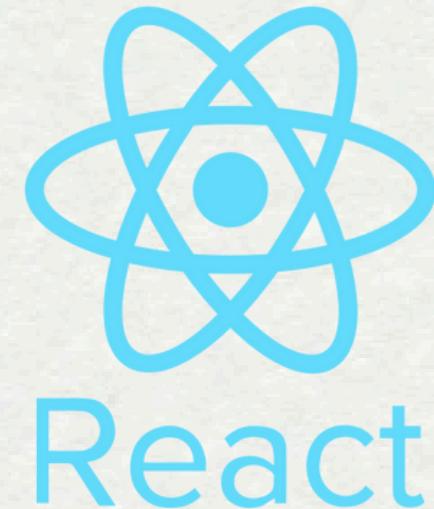
Discussions and Updates



When I really need you
here but you are not

Technologies Used for Development

Frontend

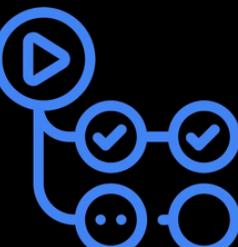


Backend



Technologies Used for Development

Testing



 GitHub Actions

Deployment



Project Management



Jira





Cost & Benefits

Cost:

Open AI API Tokens

(200 tokens input, 400 tokens output, 120 active creating questions user => ~ 50 USD per semester)

**Deployment to AWS might trigger further cost
(for better scalability and stability)**

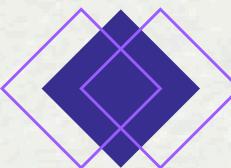
=> 30 ~ 50 USD per semester

Benefits:

Promote of Active learning and student engagement.

Unnecessary to increase the teaching team's workload

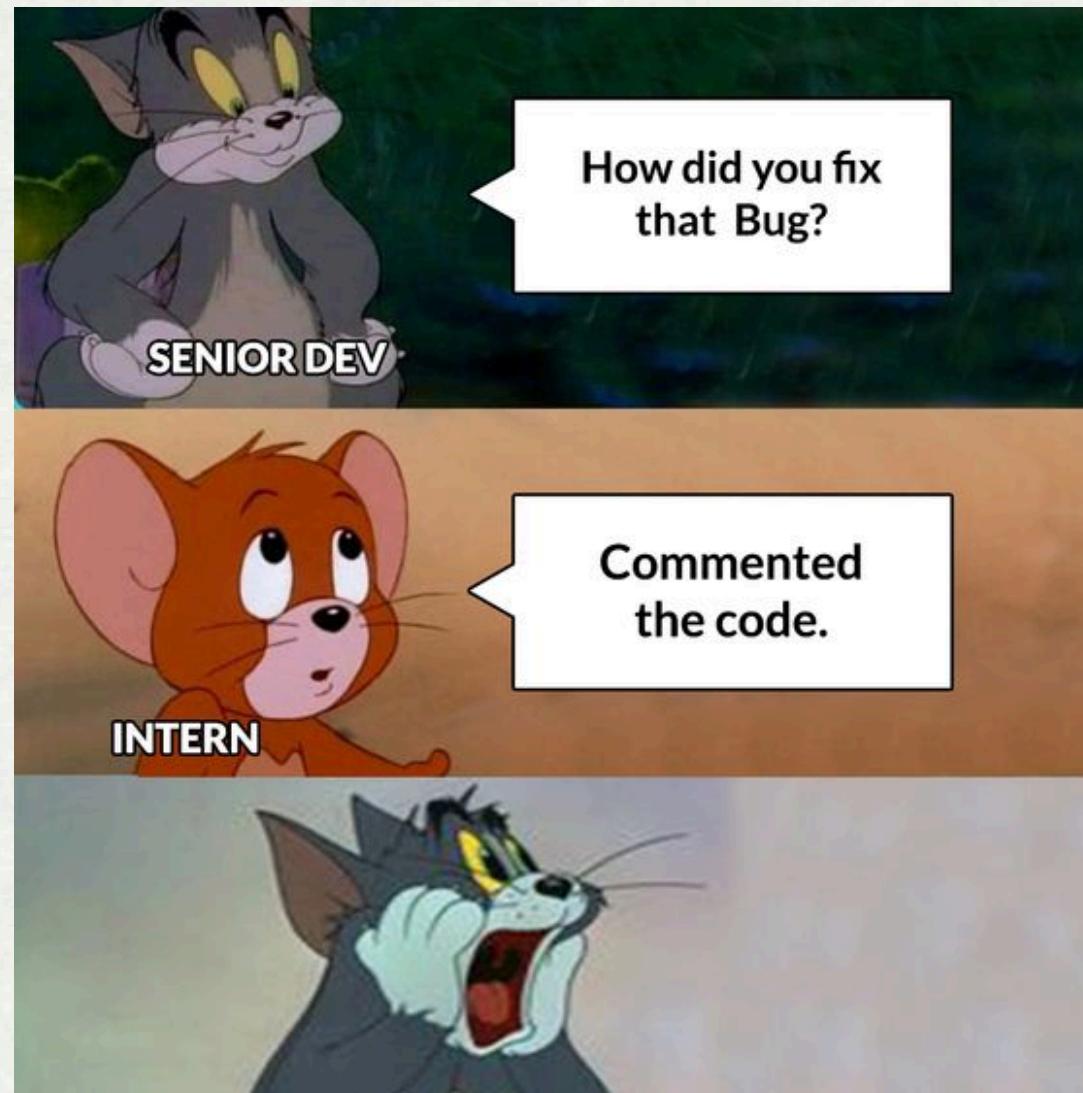




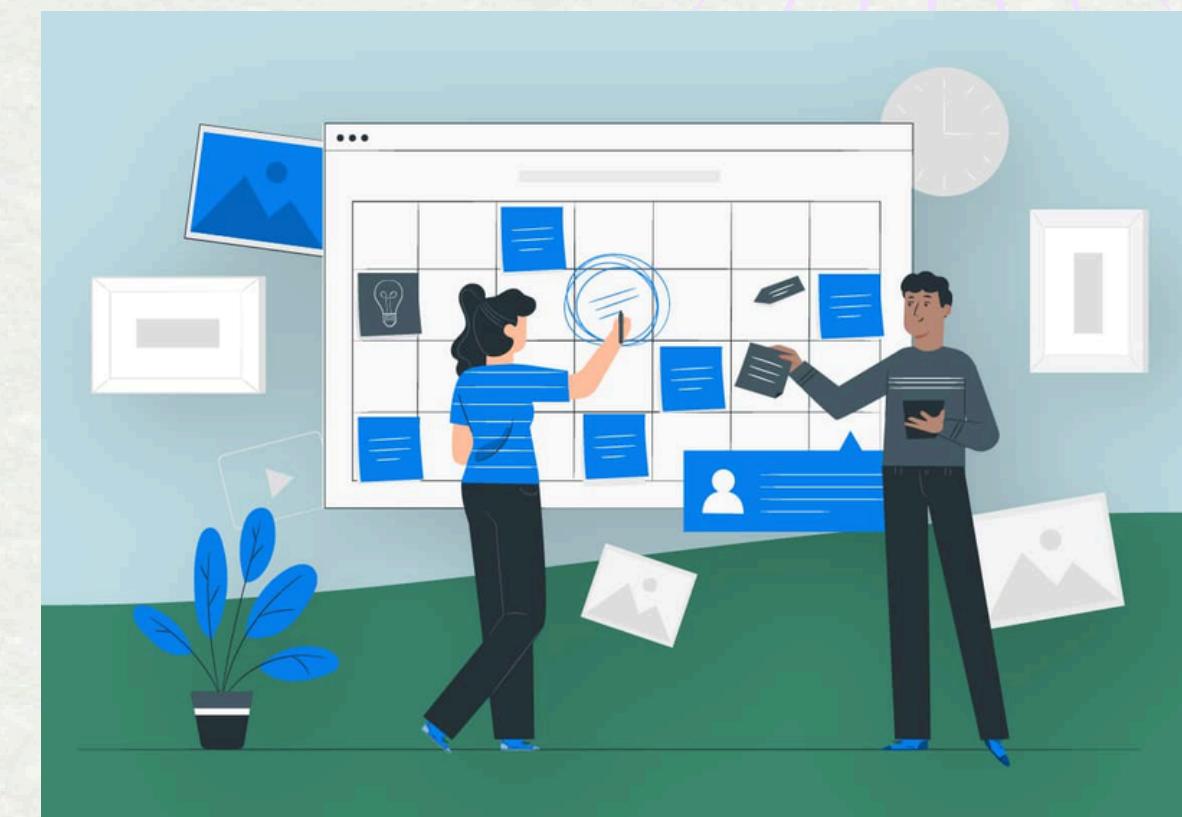
Challenges Faced



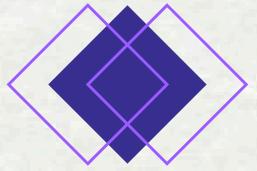
Git Commands,
Github Actions, and
Branch Management



Learning New
Languages and
Framework



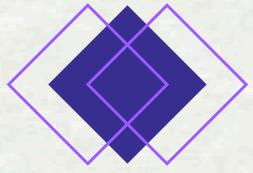
Schedule Meetings



Lessons Learned

- Client communication
 - Analysis of client requirements
- Documentation
- New programming languages and tools





What We Are Most Proud Of

- **Strong teamwork** – everyone supported each other and stayed motivated
- **Dedication** – frequent meetings and consistent effort from start to finish
- **Bridging communication** – learned to connect frontend and backend teams effectively
- **Collaboration that worked** – two groups, one shared goal, and genuine teamwork
- **Meaningful impact** – our product can truly help students learn, something we value deeply as students ourselves we made it into reality



What I Am Most Proud Of..



Teamwork



THANK YOU

Q & A SESSION

