Choosing the appropriate Js-to-compile language

Case study presentation By AnveshNalimela.

Problem statement

Consider a mid-range tech company named AnveshTech had an web application development project. The company had 10 developers with different skill set(expertized) in different languages like javascript, typescript, babel, flow, coffeescript etc.. but all are developers are familiar with javascript. Now to we had to decide the right compile to js language based on project size, team expertise, and future maintainability.





1. Javascript

→ Project Size

Suitable for small to medium projects. For larger projects, it can become cumbersome without type checking

→ Team Expertize

All team members are proficient in JavaScript.

→ Future Maintainability

Pure JavaScript lacks static typing, which can make large codebases harder to maintain.



2. Typescript

→ Project Size

Ideal for medium to large projects due to static typing and better tooling support.

→ Team Expertize

Most team members have some familiarity, and those with JavaScript experience can quickly adapt.

→ Future Maintainability

Static typing improves maintainability and reduces bugs.



3. Babel

→ Project Size

Suitable for any project size as it transpiles modern JavaScript to a compatible version.

→ Team Expertize

All team members are familiar with modern JavaScript.

→ Future Maintainability

Improves maintainability by allowing the use of modern JavaScript features, but lacks static typing



4. Coffeescript

- Project Size
 Suitable for small to medium projects.
- → Team Expertize

 Some team members are familiar, but it's less popular now.
- Future Maintainability
 Declining popularity can affect
 maintainability and finding new talent.



5. Flow

→ Project Size

Suitable for medium to large projects due to static type checking.

→ Team Expertize

Some team members have familiarity, those with JavaScript experience can adapt with some learning.

→ Future Maintainability

Static typing improves maintainability and reduces bugs, similar to TypeScript.

Here in this scenario the project size is medium hence type checking aids for better maintainability and fix bugs easily which provided by both typescript and flow.



Note:

Here the project is not mentioned either the react based or not

Whereas flow would a better choice for react-based project.

Conclusion

Typescript is suitable choice for compile to Js language for given scenario

- 1.Due to project size(medium)
- 2. Easy error detection
- 3.Better code maintainability
- 4. Familarity among some developers and easy adaptation
- 5.Large community