# A High-Quality Typesetting System Designed for the Production of Technical and Scientific Documentation

FOURTH YEAR PROJECT

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#### **Executive Summary**

As part of our coursework for the B.Sc. (Honours) in Software Development at the Galway-Mayo Institute of Technology, we were required to complete a project.

Review something.

#### About the authors

Dr. Ian McLoughlin is a lecturer in the Department of Computer Science and Applied Physics at the Galway-Mayo Institute of Technology (GMIT) in Ireland, where he teaches modules in Algorithms, Emerging Technologies and Graph Theory, among others. Previously he held academic positions at the Institute of Technology, Sligo, the Digital Enterprise Research Institute (now The Insight Centre for Data Analytics) at the National University of Ireland, Galway, and the Clique Research Cluster (now also Insight) at University College Dublin.

Ian has worked in industry at the Aon Centre for Innovation and Analytics in Dublin and at IBM Research in Zurich, Switzerland. He was involved in the development of in-house web applications at IBM Research, Aon, UCD, NUIG and Stanford University. He holds a Ph.D. in Mathematics from the National University of Ireland, Galway for which he was awarded an IRCSET scholarship. In 2014 he was the recipient of a Fulbright TechImpact Award which he took up as a Visiting Scholar at Stanford University in California.

#### **About GMIT**

GMIT [1] is a third level teaching and research institute located in the west of Ireland. GMIT's mission is to develop life-long learning opportunities through our teaching and research, by supporting regional development consistent with national higher education policy. Learning is at the core activity of the Institute, bringing students, staff and the region together to share, apply, test and create knowledge; GMIT aims to develop as a regional organisation with an international focus committed to the personal and professional enrichment of its students, the needs of its region, national priorities and global opportunities.

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#### Introduction

The objective of this project is to do the project. In section 3 we discuss the platform selection. In section 6 we conclude the report.

#### Review

- $\bullet \ \ social \ network \ platform$
- social network software
- social media platform software
- social network for higher education
- social network platform for higher education
- white-label social network software

#### Platform selection

In this section we discuss the selection of a platform on which to build our prototype. Table 3.1 is a bit big.

Criterion	Option A	Option B	Option C
Maintain	No real maintenance.	Easy to maintain; easy to find help.	Extensive technical expertise required.
Customise	Generally only branding can be customised.	Theming and plugins provide significant customisation; lower-level customisations possible but not advised.	Total control over customisations, but can be onerous.
Resilience	Based on the vendor's own resilience and their investment in the platform.	Selection of a popular platform ensures ongoing reilience.	Depends on all technologies used, can be volatile.
Community	Depends on size of social network – community often limited with some notable exceptions such as Facebook.	Large communities already established for many products.	Segmented community across each technology involved.
Reliable	Extremely reliable, often based on Service Level Agreements.	Very reliable as the platforms are well established.	Dependent on social network maintainer's ability to ensure relia- bility.

Table 3.1: Selection matrix for platform

## Deployment

This is where you list your deployment information. Check out Listing 4.1.

```
version: '3'
services:
  db:
    image: mysql:5.7
    volumes:
      - db_data:/var/lib/mysql
    restart: always
    environment:
      MYSQL_ROOT_PASSWORD: wordpress
      MYSQL_DATABASE: wordpress
      {\tt MYSQL\_USER:\ wordpress}
      MYSQL_PASSWORD: wordpress
  wordpress:
    depends_on:
      - db
    image: wordpress:latest
    volumes:
      - wp_data:/var/www/html
    ports:
      - "80:80"
    restart: always
    environment:
      WORDPRESS_DB_HOST: db:3306
      WORDPRESS_DB_PASSWORD: wordpress
volumes:
  db_data:
  wp_data:
```

Figure 4.1: Docker Compose configuration file for WordPress.

#### Configuration

See Figure 5.1.



Node.js® is a JavaScript runtime built on Chrome's V8 JavaScript engine. Node.js uses an event-driven, non-blocking I/O model that makes it lightweight and efficient.

Node.js' package ecosystem, npm, is the largest ecosystem of open source libraries in the world.

Figure 5.1: A screenshot.

## Chapter 6 Conclusion

The report concludes here.

## Bibliography

[1] GMIT. Galway-mayo institute of technology.