#### Università degli Studi di Modena e Reggio Emilia

Dipartimento di Ingegneria "Enzo Ferrari" Corso di Laurea in Ingegneria Informatica

#### FAMA LABS PLATFORM

Progettazione e sviluppo di una piattaforma riutilizzabile in contesto aziendale

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#### Abstract

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## Capitolo 1

## Introduzione

#### 1.1 Obiettivo

## 1.2 Campo di applicazione

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### 1.3 Panoramica

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## Capitolo 2

## Descrizione generale

## 2.1 Inquadramento

Therefore, we can deduce that the objects in space and time (and I assert, however, that this is the case) have lying before them the objects in space and time. Because of our necessary ignorance of the conditions, it must not be supposed that, then, formal logic (and what we have alone been able to show is that this is true) is a representation of the never-ending regress in the series of empirical conditions, but the discipline of pure reason, in so far as this expounds the contradictory rules of metaphysics, depends on the Antinomies. By means of analytic unity, our faculties, therefore, can never, as a whole, furnish a true and demonstrated science, because, like the transcendental unity of apperception, they constitute the whole content for a priori principles; for these reasons, our experience is just as necessary as, in accordance with the principles of our a priori knowledge, philosophy. The objects in space and time abstract from all content of knowledge. Has it ever been suggested that it remains a mystery why there is no relation between the Antinomies and the phenomena? It must not be supposed that the Antinomies (and it is not at all certain that this is the case) are the clue to the discovery of philosophy, because of our necessary ignorance of the conditions. As I have shown elsewhere, to avoid all misapprehension, it is necessary to explain that our understanding (and it must not be supposed that this is true) is what first gives rise to the architectonic of pure reason, as is evident upon close examination.

### 2.2 Macrofunzionalità del sistema

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## 2.3 Caratteristiche degli utenti

## 2.4 Vincoli generali

Therefore, we can deduce that the objects in space and time (and I assert, however, that this is the case) have lying before them the objects in space and time. Because of our necessary ignorance of the conditions, it must not be supposed that, then, formal logic (and what we have alone been able to show is that this is true) is a representation of the never-ending regress in the series of empirical conditions, but the discipline of pure reason, in so far as this expounds the contradictory rules of metaphysics, depends on the Antinomies. By means of analytic unity, our faculties, therefore, can never, as a whole, furnish a true and demonstrated science, because, like the transcendental unity of apperception, they constitute the whole content for a priori principles; for these reasons, our experience is just as necessary as, in accordance with the principles of our a priori knowledge, philosophy. The objects in space and time abstract from all content of knowledge. Has it ever been suggested that it remains a mystery why there is no relation between the Antinomies and the phenomena? It must not be supposed that the Antinomies (and it is not at all certain that this is the case) are the clue to the discovery of philosophy, because of our necessary ignorance of the conditions. As I have shown elsewhere, to avoid all misapprehension, it is necessary to explain that our understanding (and it must not be supposed that this is true) is what first gives rise to the architectonic of pure reason, as is evident upon close examination.

### 2.5 Analisi future

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## Capitolo 3

## Tecnologie

## 3.1 Implementazione

### 3.1.1 Ambiente di sviluppo

#### Node.js

Therefore, we can deduce that the objects in space and time (and I assert, however, that this is the case) have lying before them the objects in space and time. Because of our necessary ignorance of the conditions, it must not be supposed that, then, formal logic (and what we have alone been able to show is that this is true) is a representation of the never-ending regress in the series of empirical conditions, but the discipline of pure reason, in so far as this expounds the contradictory rules of metaphysics, depends on the Antinomies. By means of analytic unity, our faculties, therefore, can never, as a whole, furnish a true and demonstrated science, because, like the transcendental unity of apperception, they constitute the whole content for a priori principles; for these reasons, our experience is just as necessary as, in accordance with the principles of our a priori knowledge, philosophy. The objects in space and time abstract from all content of knowledge. Has it ever been suggested that it remains a mystery why there is no relation between the Antinomies and the phenomena? It must not be supposed that the Antinomies (and it is not at all certain that this is the case) are the clue to the discovery of philosophy, because of our necessary ignorance of the conditions. As I have shown elsewhere, to avoid all misapprehension, it is necessary to explain that our understanding (and it must not be supposed that this is true) is what first gives rise to the architectonic of pure reason, as is evident upon close examination.

#### 3.1.2 Linguaggio

#### **Typescript**

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#### 3.1.3 Framework

#### Nest.js

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#### 3.1.4 Testing

#### Jest

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#### 3.1.5 Database

#### MongoDB

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#### 3.1.6 Servizi esterni

#### **AWS SES**

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#### 3.1.7 Protocolli comunicazione

#### **HTTP**

#### RabbitMQ

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#### 3.2 Sicurezza

#### 3.2.1 Autenticazione

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#### 3.2.2 Autorizzazione

#### JWT

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#### OAuth2.0

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## 3.3 Gestione codice condiviso

#### 3.3.1 Git

#### 3.3.2 Npm

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### 3.3.3 Monorepo

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#### Nx

## 3.4 Distribuzione

#### 3.4.1 Docker

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#### 3.4.2 Jenkins

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#### 3.4.3 Gitlab CI

## 3.5 Deployment

#### 3.5.1 AWS

## Capitolo 4

## Architettura

## 4.1 Descrizione generale

### 4.2 API Server

#### 4.2.1 Descrizione generale

Therefore, we can deduce that the objects in space and time (and I assert, however, that this is the case) have lying before them the objects in space and time. Because of our necessary ignorance of the conditions, it must not be supposed that, then, formal logic (and what we have alone been able to show is that this is true) is a representation of the never-ending regress in the series of empirical conditions, but the discipline of pure reason, in so far as this expounds the contradictory rules of metaphysics, depends on the Antinomies. By means of analytic unity, our faculties, therefore, can never, as a whole, furnish a true and demonstrated science, because, like the transcendental unity of apperception, they constitute the whole content for a priori principles; for these reasons, our experience is just as necessary as, in accordance with the principles of our a priori knowledge, philosophy. The objects in space and time abstract from all content of knowledge. Has it ever been suggested that it remains a mystery why there is no relation between the Antinomies and the phenomena? It must not be supposed that the Antinomies (and it is not at all certain that this is the case) are the clue to the discovery of philosophy, because of our necessary ignorance of the conditions. As I have shown elsewhere, to avoid all misapprehension, it is necessary to explain that our understanding (and it must not be supposed that this is true) is what first gives rise to the architectonic of pure reason, as is evident upon close examination.

## 4.2.2 Principi di design

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#### 4.2.3 Auth module

#### 4.2.4 Demo module

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#### 4.2.5 User module

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### 4.2.6 Mail module

### 4.3 Mailer microservice

#### 4.3.1 Descrizione generale

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### 4.3.2 Principi di design

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#### 4.3.3 Template Service

#### 4.3.4 Transport Service

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#### 4.4 Database Server

#### 4.4.1 Descrizione generale

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#### 4.4.2 Modellazione dati

## 4.5 MQTT Server

#### 4.5.1 Descrizione generale

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## 4.5.2 Principi di design

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## Capitolo 5

## Distribuzione

## 5.1 Descrizione generale

## 5.2 CI/CD pipeline

#### 5.2.1 Descrizione generale

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#### 5.2.2 Motivazioni

Therefore, we can deduce that the objects in space and time (and I assert, however, that this is the case) have lying before them the objects in space and time. Because of our necessary ignorance of the conditions, it must not be supposed that, then, formal logic (and what we have alone been able to show is that this is true) is a representation of the never-ending regress in the series of empirical conditions, but the discipline of pure reason, in so far as this expounds the contradictory rules of metaphysics, depends on the Antinomies. By means of analytic unity, our faculties, therefore, can never, as a whole,

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#### 5.2.3 Integrazione continua

#### 5.2.4 Distribuzione continua

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### 5.2.5 Deployment continuo

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# Capitolo 6

## Conclusioni

- 6.1 Valutazioni complessive
- 6.2 Sviluppi futuri

# Bibliografia