# SE 216 – SOFTWARE PROJECT MANAGEMENT
# SOFTWARE TOOLS DOCUMENT

**PROJECT NAME: CodeCraft**

**GROUP NUMBER and MEMBERS: Group Number 3, Başar Kocabaş, Lorin Erol, Mert Koçyiğit, Mehmet Taşoğlu, Efran Ergelen, Haktan Yolcu**

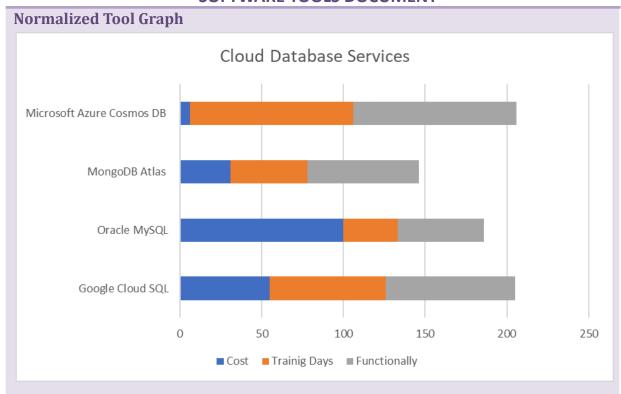| TASK # | PROJECT TASKS WHICH REQUIRE SOFTWARE TOOL SUPPORT |
|---|---|
| 1 | Storing and organizing all of the Data |
| 2 | Design visually appealing and user-friendly interfaces for the platform. |
| 3 | Integrating Online AI assistant for the platform |

**SOFTWARE TOOLS FOR TASK 1:**

**Tool Cost/Training/Functionality Data**

| Tool | Google Cloud SQL | Oracle MySQL | MongoDB Atlas | Microsoft Azure Cosmos DB |
|---|---|---|---|---|
| Cost | $100 | $179 | $57 | $11 |
| Training Days | 15 days | 7 days | 10 days | 21 days |
| Functionality | 70 | 47 | 60 | 88 |

**Normalized Cost/Training/Functionality Data**

| Tool | Google Cloud SQL | Oracle MySQL | MongoDB Atlas | Microsoft Azure Cosmos DB |
|---|---|---|---|---|
| Cost | 55.8 | 100 | **31.8** | 6.1 |
| Training Days | 71.4 | 33.3 | **47.6** | 100 |
| Functionality | 79.5 | 53.4 | **68.1** | 100 |

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**Normalized Tool Graph**



Cloud Database Services

**Which tool has been selected? Why?**

**Microsoft Azure Cosmos DB has been chosen for its lower cost and supporting open source PostgreSQL, MongoDB, and Cassandra. This noSQLs will be used to keep track of the progress data and other types of non-structured data parts of the project . Google Cloud SQL is also needed to support the design for SQL applications such as usernames, login credentials and other well structured data.**
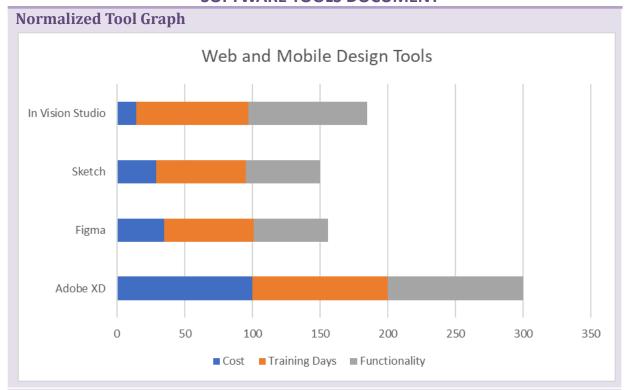
**SOFTWARE TOOLS FOR TASK 2:**

**Tool Cost/Training/Functionality Data**

| Tool | Adobe XD | Figma | Sketch | InVision Studio |
|---|---|---|---|---|
| Cost | $34 | $12 | $10 | $5 |
| Training Days | 12 | 8 | 8 | 10 |
| Functionality | 90 | 50 | 50 | 80 |

**Normalized Cost/Training/Functionality Data**

| Tool | Adobe XD | Figma | Sketch | InVision Studio |
|---|---|---|---|---|
| Cost | 100 | 35.2 | **29.4** | 14.7 |
| Training Days | 100 | 66.6 | **66.6** | 83.3 |
| Functionality | 100 | 55.5 | **55.5** | 88.8 |

**Normalized Tool Graph**



Web and Mobile Design Tools

**Which tool has been selected? Why?**

**AdobeXD has been selected for its Powerful and versatile tools with a wide range of features for UI/UX design, including vector graphics editing, prototyping, animation, and collaboration (paid plans).It is for projects that require comprehensive UI/UX design functionalities and collaboration features, especially if the team is already familiar with Adobe products.**
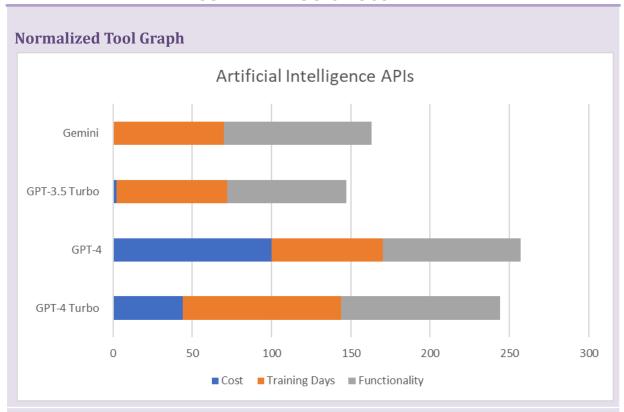
**SOFTWARE TOOLS FOR TASK 3:**

**Tool Cost/Training/Functionality Data**

| Tool | GPT-4 Turbo | GPT-4 | GPT-3.5 Turbo | Gemini |
|---|---|---|---|---|
| Cost | $20 | $45 | $1 | Free |
| Training Days | 10 | 7 | 7 | 7 |
| Functionality | 80 | 70 | 60 | 75 |

**Normalized Cost/Training/Functionality Data**

| Tool | GPT-4 Turbo | GPT-4 | GPT-3.5 Turbo | Gemini |
|---|---|---|---|---|
| Cost | 44.4 | 100 | 2.2 | 0 |
| Training Days | 100 | 70 | **70** | 70 |
| Functionality | 100 | 87.5 | **75** | 93.7 |

**Normalized Tool Graph**



Artificial Intelligence APIs

(Cost, Training Days, Functionality)

**Which tool has been selected? Why?**

Among the evaluated tools, Gemini emerges as the most suitable choice for integrating an AI assistant into your CodeCraft platform. While GPT-4 Turbo boasts the highest functionality score, its estimated cost and training days are significantly higher. Similarly, GPT-4 and GPT-3.5 Turbo come with either a considerable cost or lower functionality.

Gemini stands out for its free access and relatively lower training investment. Despite a slightly lower functionality score compared to GPT-4 Turbo, Gemini can still effectively guide users, optimize code, and fulfill the envisioned functionalities of the AI assistant. This cost-effective solution allows to experiment and explore the potential of AI integration within CodeCraft without a substantial initial investment.