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|  |  |  |
|  | ReDi |  |
|  |  |  |
|  | 6 Feb 2025 19:20:01 |  |
|  |  |  |

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|  |  |  |  |  |
|  | Purpose | | |  |
|  |  |  |  |  |
|  | This model documents the architecture of the ReDi Rehabilitation Diary application. This application was created as a solution for keeping track of and aiding rehabilitation progress using a microservices architecture. | | |  |
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|  | ReDi | 2 | / 15 |  |

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|  |  |  |  |  |  |  |
|  | Views | | | | |  |
|  |  |  |  |  |  |  |
|  | Add log entry | | | | |  |
|  | No viewpoint | | | | |  |
|  |  |  |  |  |  |  |
|  |  | | | | |  |
|  | Elements | | | |  |  |
|  |  |  |  |  |  |  |
|  | Element | Type | | |  |  |
|  | Add log entry | Business Process | | |  |  |
|  | Log in | Business Process | | |  |  |
|  | Rehabilitating patient | Business Actor | | |  |  |
|  | Reveive feedback | Business Process | | |  |  |
|  |  |  |  |  |  |  |
|  | ReDi | | 3 | / 15 | |  |

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|  | | | | |
|  |  |  |  |  |
|  | FIDDLE TO DEPLOY | | |  |
|  |  | | |  |
|  | Properties | | |  |
|  |  |  |  |  |
|  | |  |  | | --- | --- | | \_hide\_from\_export\_ | true | | | |  |
|  |  |  |  |  |
|  | ReDi | 4 | / 15 |  |

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|  |  |  |  |  |  |  |
|  | Overview | | | | |  |
|  | No viewpoint | | | | |  |
|  |  |  |  |  |  |  |
|  |  | | | | |  |
|  | Elements | | | |  |  |
|  |  |  |  |  |  |  |
|  | Element | Type | | |  |  |
|  | 8B LLM inferencing | Application Service | | |  |  |
|  | Account log-in | Application Function | | |  |  |
|  | Account registration (optional) | Application Function | | |  |  |
|  | AI Chat interface | Application Component | | |  |  |
|  | Apache Webserver (AI Chat) | Application Component | | |  |  |
|  | Apache Webserver (Dashboard) | Application Component | | |  |  |
|  | appointment module (optional) | Application Function | | |  |  |
|  | calendar (optional) | Application Function | | |  |  |
|  | exercise planning (optional) | Application Function | | |  |  |
|  |  |  |  |  |  |  |
|  | ReDi | | 5 | / 15 | |  |

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|  |  |  |  |  |  |  |
|  | Element | Type | | |  |  |
|  | exercise video player | Application Function | | |  |  |
|  | Feedback generation | Application Service | | |  |  |
|  | Help through AI chat | Application Function | | |  |  |
|  | Kong Application Database (postgres) | Application Component | | |  |  |
|  | Kong data storage | Application Service | | |  |  |
|  | LLM provider (ollama) | Application Component | | |  |  |
|  | Log/diary + feedback | Application Function | | |  |  |
|  | ReDi Rehabilitation Diary | Application Component | | |  |  |
|  | Rehabilitation progress feedback service | Application Component | | |  |  |
|  | REST API Gateway + Auth (Kong Gateway) | Application Component | | |  |  |
|  | S3-compatible API | Application Interface | | |  |  |
|  | Stopwatch (optional) | Application Function | | |  |  |
|  | User data | Application Service | | |  |  |
|  | User data storage service (MariaDB) | Application Component | | |  |  |
|  | Video data | Application Service | | |  |  |
|  | Video storage service | Application Component | | |  |  |
|  | Video Stream | Application Service | | |  |  |
|  | webapp dashboard (self-built container) | Application Component | | |  |  |
|  |  |  |  |  |  |  |
|  | ReDi | | 6 | / 15 | |  |

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|  |  |  |  |  |  |
|  | Business Layer | | | |  |
|  |  |  |  |  |  |
|  | Add log entry | | | |  |
|  |  |  |  |  |  |
|  | Type | Business Process | | |  |
|  |  |  |  |  |  |
|  | Log in | | | |  |
|  |  |  |  |  |  |
|  | Type | Business Process | | |  |
|  |  |  |  |  |  |
|  | Rehabilitating patient | | | |  |
|  |  |  |  |  |  |
|  | Type | Business Actor | | |  |
|  |  |  |  |  |  |
|  | Reveive feedback | | | |  |
|  |  |  |  |  |  |
|  | Type | Business Process | | |  |
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|  |  |  |  |  |  |  |
|  | Application Layer | | | | |  |
|  |  |  |  |  |  |  |
|  | 8B LLM inferencing | | | | |  |
|  |  |  |  |  |  |  |
|  | Type | | Application Service | | |  |
|  |  |  |  |  |  |  |
|  | Account log-in | | | | |  |
|  |  |  |  |  |  |  |
|  | Type | | Application Function | | |  |
|  |  |  |  |  |  |  |
|  | Account registration (optional) | | | | |  |
|  |  |  |  |  |  |  |
|  | Type | | Application Function | | |  |
|  |  |  |  |  |  |  |
|  | AI Chat interface | | | | |  |
|  |  |  |  |  |  |  |
|  | Type | | Application Component | | |  |
|  |  |  |  |  |  |  |
|  | Apache Webserver (AI Chat) | | | | |  |
|  |  |  |  |  |  |  |
|  | Type | | Application Component | | |  |
|  |  |  |  |  |  |  |
|  | Apache Webserver (Dashboard) | | | | |  |
|  |  |  |  |  |  |  |
|  | Type | | Application Component | | |  |
|  |  |  |  |  |  |  |
|  | appointment module (optional) | | | | |  |
|  |  |  |  |  |  |  |
|  | Type | | Application Function | | |  |
|  |  |  |  |  |  |  |
|  |  | maken van afspraken | | | |  |
|  |  |  |  |  |  |  |
|  | calendar (optional) | | | | |  |
|  |  |  |  |  |  |  |
|  | Type | | Application Function | | |  |
|  |  |  |  |  |  |  |
|  | exercise planning (optional) | | | | |  |
|  |  |  |  |  |  |  |
|  | Type | | Application Function | | |  |
|  |  |  |  |  |  |  |
|  |  | weergeven schema (e.g. oefening X en Y 4x per week) | | | |  |
|  |  |  |  |  |  |  |
|  | exercise video player | | | | |  |
|  |  |  |  |  |  |  |
|  | Type | | Application Function | | |  |
|  |  |  |  |  |  |  |
|  | Feedback generation | | | | |  |
|  |  |  |  |  |  |  |
|  | Type | | Application Service | | |  |
|  |  |  |  |  |  |  |
|  | Help through AI chat | | | | |  |
|  |  |  |  |  |  |  |
|  | Type | | Application Function | | |  |
|  |  |  |  |  |  |  |
|  | Kong Application Database (postgres) | | | | |  |
|  |  |  |  |  |  |  |
|  | Type | | Application Component | | |  |
|  |  |  |  |  |  |  |
|  | ReDi | | | 8 | / 15 |  |

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|  | | | | | | |
|  |  |  |  |  |  |  |
|  | Kong data storage | | | | |  |
|  |  |  |  |  |  |  |
|  | Type | | Application Service | | |  |
|  |  |  |  |  |  |  |
|  | LLM provider (ollama) | | | | |  |
|  |  |  |  |  |  |  |
|  | Type | | Application Component | | |  |
|  |  |  |  |  |  |  |
|  | Log/diary + feedback | | | | |  |
|  |  |  |  |  |  |  |
|  | Type | | Application Function | | |  |
|  |  |  |  |  |  |  |
|  | ReDi Rehabilitation Diary | | | | |  |
|  |  |  |  |  |  |  |
|  | Type | | Application Component | | |  |
|  |  |  |  |  |  |  |
|  |  | ReDi is a | | | |  |
|  |  |  |  |  |  |  |
|  | Rehabilitation progress feedback service | | | | |  |
|  |  |  |  |  |  |  |
|  | Type | | Application Component | | |  |
|  |  |  |  |  |  |  |
|  | REST API Gateway + Auth (Kong Gateway) | | | | |  |
|  |  |  |  |  |  |  |
|  | Type | | Application Component | | |  |
|  |  |  |  |  |  |  |
|  |  | paired with external auth using https://github.com/aunkenlabs/kong-external-auth/ | | | |  |
|  |  |  |  |  |  |  |
|  | S3-compatible API | | | | |  |
|  |  |  |  |  |  |  |
|  | Type | | Application Interface | | |  |
|  |  |  |  |  |  |  |
|  | Stopwatch (optional) | | | | |  |
|  |  |  |  |  |  |  |
|  | Type | | Application Function | | |  |
|  |  |  |  |  |  |  |
|  | User data | | | | |  |
|  |  |  |  |  |  |  |
|  | Type | | Application Service | | |  |
|  |  |  |  |  |  |  |
|  | User data storage service (MariaDB) | | | | |  |
|  |  |  |  |  |  |  |
|  | Type | | Application Component | | |  |
|  |  |  |  |  |  |  |
|  | Video data | | | | |  |
|  |  |  |  |  |  |  |
|  | Type | | Application Service | | |  |
|  |  |  |  |  |  |  |
|  | Video storage service | | | | |  |
|  |  |  |  |  |  |  |
|  | Type | | Application Component | | |  |
|  |  |  |  |  |  |  |
|  |  | Minio is an S3-compatible storage provider | | | |  |
|  |  |  |  |  |  |  |
|  | ReDi | | | 9 | / 15 |  |

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|  | | | | | |
|  |  |  |  |  |  |
|  | Video Stream | | | |  |
|  |  |  |  |  |  |
|  | Type | Application Service | | |  |
|  |  |  |  |  |  |
|  | webapp dashboard (self-built container) | | | |  |
|  |  |  |  |  |  |
|  | Type | Application Component | | |  |
|  |  |  |  |  |  |
|  | ReDi | | 10 | / 15 |  |

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|  |  |  |  |  |  |
|  | Relations | | | |  |
|  |  |  |  |  |  |
|  | Realization relation | | | |  |
|  |  |  |  |  |  |
|  | Type | Realization relation | | |  |
|  | Source | webapp dashboard (self-built container) | | |  |
|  | Target | Stopwatch (optional) | | |  |
|  |  |  |  |  |  |
|  | Realization relation | | | |  |
|  |  |  |  |  |  |
|  | Type | Realization relation | | |  |
|  | Source | webapp dashboard (self-built container) | | |  |
|  | Target | Log/diary + feedback | | |  |
|  |  |  |  |  |  |
|  | Composition relation | | | |  |
|  |  |  |  |  |  |
|  | Type | Composition relation | | |  |
|  | Source | ReDi Rehabilitation Diary | | |  |
|  | Target | LLM provider (ollama) | | |  |
|  |  |  |  |  |  |
|  | Realization relation | | | |  |
|  |  |  |  |  |  |
|  | Type | Realization relation | | |  |
|  | Source | webapp dashboard (self-built container) | | |  |
|  | Target | calendar (optional) | | |  |
|  |  |  |  |  |  |
|  | Composition relation | | | |  |
|  |  |  |  |  |  |
|  | Type | Composition relation | | |  |
|  | Source | ReDi Rehabilitation Diary | | |  |
|  | Target | Rehabilitation progress feedback service | | |  |
|  |  |  |  |  |  |
|  | Composition relation | | | |  |
|  |  |  |  |  |  |
|  | Type | Composition relation | | |  |
|  | Source | ReDi Rehabilitation Diary | | |  |
|  | Target | Kong Application Database (postgres) | | |  |
|  |  |  |  |  |  |
|  | Realization relation | | | |  |
|  |  |  |  |  |  |
|  | Type | Realization relation | | |  |
|  | Source | Video storage service | | |  |
|  | Target | Video Stream | | |  |
|  |  |  |  |  |  |
|  | Composition relation | | | |  |
|  |  |  |  |  |  |
|  | Type | Composition relation | | |  |
|  | Source | ReDi Rehabilitation Diary | | |  |
|  | Target | AI Chat interface | | |  |
|  |  |  |  |  |  |
|  | Realization relation | | | |  |
|  |  |  |  |  |  |
|  | Type | Realization relation | | |  |
|  |  |  |  |  |  |
|  | ReDi | | 11 | / 15 |  |

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| --- | --- | --- | --- | --- | --- |
|  | | | | | |
|  |  |  |  |  |  |
|  | Source | Rehabilitation progress feedback service | | |  |
|  | Target | Feedback generation | | |  |
|  |  |  |  |  |  |
|  | Composition relation | | | |  |
|  |  |  |  |  |  |
|  | Type | Composition relation | | |  |
|  | Source | ReDi Rehabilitation Diary | | |  |
|  | Target | User data storage service (MariaDB) | | |  |
|  |  |  |  |  |  |
|  | Flow relation | | | |  |
|  |  |  |  |  |  |
|  | Type | Flow relation | | |  |
|  | Source | Video storage service | | |  |
|  | Target | REST API Gateway + Auth (Kong Gateway) | | |  |
|  |  |  |  |  |  |
|  | Realization relation | | | |  |
|  |  |  |  |  |  |
|  | Type | Realization relation | | |  |
|  | Source | webapp dashboard (self-built container) | | |  |
|  | Target | Account registration (optional) | | |  |
|  |  |  |  |  |  |
|  | Flow relation | | | |  |
|  |  |  |  |  |  |
|  | Type | Flow relation | | |  |
|  | Source | User data storage service (MariaDB) | | |  |
|  | Target | REST API Gateway + Auth (Kong Gateway) | | |  |
|  |  |  |  |  |  |
|  | Realization relation | | | |  |
|  |  |  |  |  |  |
|  | Type | Realization relation | | |  |
|  | Source | AI Chat interface | | |  |
|  | Target | Help through AI chat | | |  |
|  |  |  |  |  |  |
|  | Composition relation | | | |  |
|  |  |  |  |  |  |
|  | Type | Composition relation | | |  |
|  | Source | webapp dashboard (self-built container) | | |  |
|  | Target | Apache Webserver (Dashboard) | | |  |
|  |  |  |  |  |  |
|  | Realization relation | | | |  |
|  |  |  |  |  |  |
|  | Type | Realization relation | | |  |
|  | Source | webapp dashboard (self-built container) | | |  |
|  | Target | appointment module (optional) | | |  |
|  |  |  |  |  |  |
|  | Flow relation | | | |  |
|  |  |  |  |  |  |
|  | Type | Flow relation | | |  |
|  | Source | Kong Application Database (postgres) | | |  |
|  | Target | REST API Gateway + Auth (Kong Gateway) | | |  |
|  |  |  |  |  |  |
|  | ReDi | | 12 | / 15 |  |

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|  |  |  |  |  |  |
|  | Composition relation | | | |  |
|  |  |  |  |  |  |
|  | Type | Composition relation | | |  |
|  | Source | ReDi Rehabilitation Diary | | |  |
|  | Target | Video storage service | | |  |
|  |  |  |  |  |  |
|  | Realization relation | | | |  |
|  |  |  |  |  |  |
|  | Type | Realization relation | | |  |
|  | Source | webapp dashboard (self-built container) | | |  |
|  | Target | Account log-in | | |  |
|  |  |  |  |  |  |
|  | Realization relation | | | |  |
|  |  |  |  |  |  |
|  | Type | Realization relation | | |  |
|  | Source | Kong Application Database (postgres) | | |  |
|  | Target | Kong data storage | | |  |
|  |  |  |  |  |  |
|  | Realization relation | | | |  |
|  |  |  |  |  |  |
|  | Type | Realization relation | | |  |
|  | Source | webapp dashboard (self-built container) | | |  |
|  | Target | exercise planning (optional) | | |  |
|  |  |  |  |  |  |
|  | Realization relation | | | |  |
|  |  |  |  |  |  |
|  | Type | Realization relation | | |  |
|  | Source | User data storage service (MariaDB) | | |  |
|  | Target | User data | | |  |
|  |  |  |  |  |  |
|  | Composition relation | | | |  |
|  |  |  |  |  |  |
|  | Type | Composition relation | | |  |
|  | Source | AI Chat interface | | |  |
|  | Target | Apache Webserver (AI Chat) | | |  |
|  |  |  |  |  |  |
|  | Flow relation | | | |  |
|  |  |  |  |  |  |
|  | Type | Flow relation | | |  |
|  | Source | REST API Gateway + Auth (Kong Gateway) | | |  |
|  | Target | Kong Application Database (postgres) | | |  |
|  |  |  |  |  |  |
|  | Composition relation | | | |  |
|  |  |  |  |  |  |
|  | Type | Composition relation | | |  |
|  | Source | ReDi Rehabilitation Diary | | |  |
|  | Target | webapp dashboard (self-built container) | | |  |
|  |  |  |  |  |  |
|  | Composition relation | | | |  |
|  |  |  |  |  |  |
|  | Type | Composition relation | | |  |
|  | Source | Video storage service | | |  |
|  | Target | S3-compatible API | | |  |
|  |  |  |  |  |  |
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|  | | | | | |
|  |  |  |  |  |  |
|  | Flow relation | | | |  |
|  |  |  |  |  |  |
|  | Type | Flow relation | | |  |
|  | Source | REST API Gateway + Auth (Kong Gateway) | | |  |
|  | Target | LLM provider (ollama) | | |  |
|  |  |  |  |  |  |
|  | Serving relation | | | |  |
|  |  |  |  |  |  |
|  | Type | Serving relation | | |  |
|  | Source | Stopwatch (optional) | | |  |
|  | Target | webapp dashboard (self-built container) | | |  |
|  |  |  |  |  |  |
|  | Realization relation | | | |  |
|  |  |  |  |  |  |
|  | Type | Realization relation | | |  |
|  | Source | webapp dashboard (self-built container) | | |  |
|  | Target | exercise video player | | |  |
|  |  |  |  |  |  |
|  | Flow relation | | | |  |
|  |  |  |  |  |  |
|  | Type | Flow relation | | |  |
|  | Source | REST API Gateway + Auth (Kong Gateway) | | |  |
|  | Target | User data storage service (MariaDB) | | |  |
|  |  |  |  |  |  |
|  | Realization relation | | | |  |
|  |  |  |  |  |  |
|  | Type | Realization relation | | |  |
|  | Source | LLM provider (ollama) | | |  |
|  | Target | 8B LLM inferencing | | |  |
|  |  |  |  |  |  |
|  | Composition relation | | | |  |
|  |  |  |  |  |  |
|  | Type | Composition relation | | |  |
|  | Source | ReDi Rehabilitation Diary | | |  |
|  | Target | REST API Gateway + Auth (Kong Gateway) | | |  |
|  |  |  |  |  |  |
|  | Realization relation | | | |  |
|  |  |  |  |  |  |
|  | Type | Realization relation | | |  |
|  | Source | Video storage service | | |  |
|  | Target | Video data | | |  |
|  |  |  |  |  |  |
|  | Flow relation | | | |  |
|  |  |  |  |  |  |
|  | Type | Flow relation | | |  |
|  | Source | LLM provider (ollama) | | |  |
|  | Target | REST API Gateway + Auth (Kong Gateway) | | |  |
|  |  |  |  |  |  |
|  | Authentication + data | | | |  |
|  |  |  |  |  |  |
|  | Type | Flow relation | | |  |
|  | Source | REST API Gateway + Auth (Kong Gateway) | | |  |
|  |  |  |  |  |  |
|  | ReDi | | 14 | / 15 |  |

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| --- | --- | --- | --- | --- | --- |
|  | | | | | |
|  |  |  |  |  |  |
|  | Target | webapp dashboard (self-built container) | | |  |
|  |  |  |  |  |  |
|  | Authentication + responses | | | |  |
|  |  |  |  |  |  |
|  | Type | Flow relation | | |  |
|  | Source | REST API Gateway + Auth (Kong Gateway) | | |  |
|  | Target | AI Chat interface | | |  |
|  |  |  |  |  |  |
|  | Chat requests | | | |  |
|  |  |  |  |  |  |
|  | Type | Flow relation | | |  |
|  | Source | AI Chat interface | | |  |
|  | Target | REST API Gateway + Auth (Kong Gateway) | | |  |
|  |  |  |  |  |  |
|  | Data entry | | | |  |
|  |  |  |  |  |  |
|  | Type | Flow relation | | |  |
|  | Source | webapp dashboard (self-built container) | | |  |
|  | Target | REST API Gateway + Auth (Kong Gateway) | | |  |
|  |  |  |  |  |  |
|  | Progress feedback + LLM requests | | | |  |
|  |  |  |  |  |  |
|  | Type | Flow relation | | |  |
|  | Source | Rehabilitation progress feedback service | | |  |
|  | Target | REST API Gateway + Auth (Kong Gateway) | | |  |
|  |  |  |  |  |  |
|  | User logs + LLM responses | | | |  |
|  |  |  |  |  |  |
|  | Type | Flow relation | | |  |
|  | Source | REST API Gateway + Auth (Kong Gateway) | | |  |
|  | Target | Rehabilitation progress feedback service | | |  |
|  |  |  |  |  |  |
|  | ReDi | | 15 | / 15 |  |