**Decomposition of EzMealz (Threat Model Process Step 1)**



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Table of Contents

| 1. | Cover Page | 1 |
| --- | --- | --- |
| 2. | Table of Contents | 2 |
| 3. | Report Introduction | 3 |
| 4. | EzMealz SystemAssets | 3 |
| 5. | EzMealz Critical Assets | 3 |
| 6. | Risk Appetite | 4 |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
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# **Report Introduction**

This Report will outline

1. The description of EzMealz
2. Users of the application
3. Document Owner, participates of the threat modeling process, and reviewer
4. External dependencies
5. Entry and exit points of EzMealz
6. Assets of the application
7. Trust levels
8. Data flow diagrams

**EzMealz Threat Model Information**

**Application Version:** 1.0

**Description:** EzMealz is a web application to provide recipe links that have been verified to be easy to cook and are beginner friendly. Many online recipes that claim to be quick and easy take longer than expected or are more difficult than anticipated, and EzMealz aims to provide recipes that have been verified to truly be time efficient and easy to make. There will be two users:

1. External users
2. Internal application administrators

**EzMealz External Dependencies**

| **ID** | **Description** |
| --- | --- |
| 1 | EzMealz runs on an Azure Web App service instance on a Linux cloud server. The cloud server adheres to the Azure security protocols and standards, such as Microsoft Azure TLS certificate issues and activity monitoring and health checks. |
| 2 | The database storing all information is MongoDB. It is a document-based, non-SQL open-source database. The database adheres to MongoDB’s standards such as encryption, authentication, and access control. |
| 3 | The connection between the web application and the MongoDB server is done through the Node.Js driver named mongodb. The connection string from the database is used to establish the connection and make and manipulate schemas. |
| 4 | Payment Processing for subscription service in EzMealz will be done through PayPal. |
| 5 | Shipping of merchandise done through FedEx. |
| 6 | Source code is stored in a GitHub repository. |

**EzMealz Entry Points**

| **ID** | **Name** | **Description** | **Trust Levels** |
| --- | --- | --- | --- |
| 1 | HTTP Port | A entry port into the web application. Accessing through HTTP is not secure and not recommended, but it is currently available. | (1) Anonymous Web User  (2) User with valid login credentials  (3) User with invalid login credentials  (4) Web application administrator |
| 1.1 | HTTPS Port | Secure entry point into the web application. A future improvement to the web application includes exclusive access to EzMealz through HTTPS only | (1) Anonymous Web User  (2) User with valid login credentials  (3) User with invalid login credentials  (4) Web application administrator |
| 1.3 | EzMealz Home Page | The home page for EzMealz and it is the entry point for all users of the website | (1) Anonymous Web User  (2) User with valid login credentials  (3) User with invalid login credentials  (4) Web application administrator |
| 1.3.1 | Search Bar | Allows the user to search for a recipe based on keywords. Ex: “chicken” will return recipes that have chicken. | (1) Anonymous Web User  (2) User with valid login credentials  (3) User with invalid login credentials  (4) Web application administrator |
| 1.4 | Login Page | Page for users to log in to their account. Logging in is not mandatory to use the website, but future implementations will allow the user to save recipes. | (1) Anonymous Web User  (2) User with valid login credentials  (3) User with invalid login credentials  (4) Web application administrator |
| 1.4.1 | Login Function | Takes in user-supplied input and compares them with information in the database to verify if the user has an account | (2) User with valid login credentials  (3) User with invalid login credentials  (4) Web application administrator |
| 1.5 | Sign Up Page | Page to create an account. The future release of EzMealz will allow people with accounts to save recipes | (1) Anonymous Web User  (2) User with valid login credentials  (3) User with invalid login credentials  (4) Web application administrator |
| 1.5.1 | Sign Up Function | Takes in user input to create an account and save it to the database | (2) User with login credentials  (3) User with valid login credentials  (4) Web application administrator |
| 1.6 | Subscribe Page | Page to subscribe to EzMealz that allows the user perks such as ad-free browsing, monthly merchandise, and exclusive recipes sent to their | (1) Anonymous Web User  (2) User with login credentials  (3) User with invalid login credentials  (4) Web application administrator |
| 1.6.1 | Subscribe function | Takes in user input for subscription payment and saves it to the database | (1) Anonymous Web User  (2) User with valid login credentials  (3) User with invalid login credentials  (4) Web application administrator |
| 1.7 | View Subscribers Page | Allows the administrator to view subscribers and their information | (4) Web application administrator  (5) Database administrator |

**EzMealz Assets**

| **ID** | **Name** | **Description** | **Trust Levels** |
| --- | --- | --- | --- |
| **1** | **EzMealz Users and Administrators** | **Assets relating to EzMealz users and administrators** |  |
| 1.1 | User login credentials | The username and password that EzMealz users and administrator will use to log into the application | (2) User with valid login credentials  (4) Web application administrator  (5) Database administrator |
| 1.2 | Subscriber Information | Personal information of EzMealz subscribers. Information includes name, physical address, and credit card information | (4) Web application administrator  (5) Database administrator |
| **2** | **System** | **Assets relating to the EzMealz system functionality** |  |
| 2.1 | Availability of EzMealz | EzMealz should be available 24 hours, seven days a week unless maintenance is being done on the application | (4) Web application administrator  (5) Database administrator |
| 2.2 | Ability to change source code to the website | The ability to change the source code to the website and change the structure or look of the web application | (4) Web application administrator |
| 2.3 | Ability to modify GitHub repository and make push/pull requests | The ability to change code through GitHub and deploy the code through GitHub Actions | (4) Web application administrator |
| 2.4 | Ability to modify the MongoDB Database | The ability to change the contents of the database. This includes adding and deleting. | (5) Database administrators |
| **3** | **Website** | **Assets relating to the EzMealz Website** |  |
| 3.1 | Login Session | Login session of the EzMealz user. This includes regular users and administrators. | (2) User with valid login credentials  (4) Web application administrator |
| 3.2 | MongoDB Database Access | Access to the MongoDB database has full ability to create, read, update, and delete contents from the database | (5) Database administrator |
| 3.3 | Ability to create users | Ability to create a profile on EzMealz | (1) Anonymous Web User  (2) User with valid login credentials  (3) User with invalid login credentials |
| 3.4 | Ability to subscribe to EzMealz | Ability to subscribe to EzMealz for exclusive content and monthly merchandise | (1) Anonymous Web User  (2) User with valid login credentials  (3) User with invalid login credentials |

**Trust Levels**

| **ID** | **Name** | **Description** |
| --- | --- | --- |
| 1 | Anonymous Web User | User who is browsing EzMealz but does not have a profile or is subscribed to the web application. |
| 2 | User with Valid Login Credentials | User who is browsing EzMealz and is logged into the website with valid credentials. |
| 3 | User with Invalid Login Credentials | User who is on EzMealz and is trying to log into the website using invalid credentials. |
| 4 | Web Application Administrator | Administrator of EzMealz who can change contents and view subscriber information. |
| 5 | Database Administrator | Administrator of the EzMealz MongoDB database and has read and write access. |