

---

# **Software Requirements Specification**

**for**

## **BabyBites**

**Version 1.0 approved**

**Dan Ledwith, Dominique Willis, Martin Salisbury,  
Asia Acosta, Cameron Williams, Diogo Silva**

**Old Dominion University**

**November 24, 2025**

## Table of Contents

<b>1. Introduction.....</b>	<b>3</b>
1.1 Purpose .....	3
1.2 Scope .....	3
1.3 Definitions, Acronyms, and Abbreviations .....	4
1.4 References .....	5
1.5 Overview .....	7
<b>2. Overall Description.....</b>	<b>7</b>
2.1 Product Perspective .....	7
2.2 Product Functions .....	7
2.3 User Characteristics .....	7
2.4 Constraints .....	7
2.5 Assumptions and Dependencies .....	7

## 1. Introduction

The first 1000 days of life have been identified as a sensitive period during which children are most vulnerable to behavioral and cognitive deficiencies (Roberts et al., 2022). The foundation for long-term health, cognitive development, and healthy eating habits is established by adequate nutrition during early childhood. However, 25-35 percent of new parents and caregivers find it difficult when transitioning their little ones from milk to solid foods (Norlyk et al., 2019). Typically, babies begin this transition around six months, starting with pureed foods before gradually moving to more textured solids (Kuo et al., 2010). This transition can be overwhelming for parents and caregivers, as it can be difficult to know which foods are safe at various stages, how to prepare them, and when to introduce certain utensils. According to the World Health Organization (WHO), in 2022 undernutrition was alarmingly associated with 45 percent of child deaths globally (WHO, 2023). To address this gap, BabyBites, a mobile-first web application is designed to guide parents and caregivers through the transition from milk to solids and eventually, to more complex meals appropriate for toddlers.

### 1.1 Purpose

This document provides detailed specifications and requirements for BabyBites, a web-based application to assist parents and caregivers in making feeding transitions for their children.

### 1.2 Scope

BabyBites is designed to support parents and caregivers as they guide their children through the critical transition from milk to solid foods by providing an easy-to-use, mobile-first web application. Designed to reduce overwhelm, BabyBites ensures balanced nutrition and helps babies and toddlers develop healthy eating habits. BabyBites provides parents and caregivers with expert-backed resources, meal preparation tips, alerts about allergies, choking hazards, and developmental milestones that will give parents and caregivers the peace of mind and the confidence to nurture their child's growth. The objective of BabyBites is to simplify decision-making, promote balanced nutrition, and give parents and caregivers peace of mind throughout the transition from milk to solid foods.

### 1.3 Definitions, Acronyms, and Abbreviations

Baby Profile	A user-created profile to categorize their children within the application.
Daily Report	A summary of user milestones and pertinent information regarding their child (i.e. food consumption, milestones, allergies).
Dashboard	The home page of the user. It features shortcuts to relevant pages and displays daily reports.
Filter	A sorting function that will allow specific items to be displayed based on input.
Food Database	A comprehensive database that allows users to look up various food, view nutritional information and access preparation tips.
Food Tracker	A log the user can modify to maintain a history of foods given to the child.
FoodData Central API	USDA's database for food that will be used as a source of information for the BabyBite's food datatable.
IDE (Integrated Development Environment)	A software application, such as VSCode, that provides tools for writing, testing, and debugging code.
Notification	An alert that will notify the user of important information (i.e. allergies, choking hazards).
Search	BabyBites' food searching feature.
User	Any person who has created an account and utilizes the application.

## 1.4 References

American Academy of Pediatrics. (n.d.). Infant Food and Feeding.  
[https://www.aap.org/en/patient-care/healthy-active-living-for-families/infant-food-and-feeding/?srsltid=AfmBOoooqF2B8Yv9QLX0-zkfUPiVyOd7sYSXx\\_IwdNwDXoQY8jWRW96I](https://www.aap.org/en/patient-care/healthy-active-living-for-families/infant-food-and-feeding/?srsltid=AfmBOoooqF2B8Yv9QLX0-zkfUPiVyOd7sYSXx_IwdNwDXoQY8jWRW96I)

Centers for Disease Control and Prevention. (2024, October 10). *Choking hazards*. Infant and Toddler Nutrition.  
<https://www.cdc.gov/infant-toddler-nutrition/foods-and-drinks/choking-hazards.html>

CleanPNG. (n.d.). Amazon Web Services (AWS) logo [Digital image].  
<https://www.cleanpng.com/png-amazon-com-logo-amazon-web-services-amazon-elastic-6077407/>

Cunningham, W. (2001). Manifesto for Agile Software Development.  
<https://agilemanifesto.org/>

EPAM SolutionsHub. (2022, June 10). Risk Management in Software Engineering.  
<https://solutionshub.epam.com/blog/post/risk-management>

EvelynsPearls. (2025). Fruit Clipart Cute Fruit. [Digital art]. Etsy.  
[https://www.etsy.com/listing/1690787694/fruit-clipart-cute-fruit-png-cute-food?ref=yr\\_purchases](https://www.etsy.com/listing/1690787694/fruit-clipart-cute-fruit-png-cute-food?ref=yr_purchases)

EvelynsPearls. (2025). Vegetable Clipart Cute Vegetable. [Digital art]. Etsy.  
[https://www.etsy.com/listing/1690789328/vegetable-clipart-cute-vegetable-png?ref=yr\\_purchases](https://www.etsy.com/listing/1690789328/vegetable-clipart-cute-vegetable-png?ref=yr_purchases)

Federal Trade Commission. (2013, January 17). Children's Online Privacy Protection Rule (COPPA). <https://www.ftc.gov/system/files/2012-31341.pdf>

Freepik. (n.d.). Make family icon outline gradient [Digital image].  
[https://www.freepik.com/premium-vector/make-family-icon-outline-gradient\\_122127985.htm#from\\_element=detail\\_alsolike](https://www.freepik.com/premium-vector/make-family-icon-outline-gradient_122127985.htm#from_element=detail_alsolike)

Kuo, A. A., Inkelas, M., Slusser, W. M., Maidenberg, M., & Halfon, N. (2010). Introduction of Solid Food to Young Infants. *Maternal and Child Health Journal*, 15(8), 1185–1194.  
<https://doi.org/10.1007/s10995-010-0669-5>

LovelyLovelyScribble. (2025). Kawaii Cute Fruit. [Digital art]. Etsy.  
[https://www.etsy.com/listing/1489955189/kawaii-cute-fruit-png-bundle?ref=yr\\_purchases](https://www.etsy.com/listing/1489955189/kawaii-cute-fruit-png-bundle?ref=yr_purchases)

Meta. (n.d.). React logo [Digital image]. <https://react.dev/>

National Institute of Standards and Technology (NIST). (n.d.). USDA logo [Digital image].  
<https://www.nist.gov/image/usda-logo>

Norlyk, A., Larsen, J. S., & Kronborg, H. (2019). Infants' transition from milk to solid foods - the lived experiences of first-time parents. *International Journal of Qualitative Studies on Health and Well-Being*, 14(1). <https://doi.org/10.1080/17482631.2019.1693483>

OpenGIS. (n.d.). Django Python logo [Digital image].  
<https://www.opengis.ch/django-python-logo-2/>

PostgreSQL Global Development Group. (n.d.). PostgreSQL logo [Digital image].  
<https://www.postgresql.org/>

Refineddigitalbites. (2025). Baby fruits and vegetables. [Digital art]. Etsy.  
[https://www.etsy.com/listing/1704009895/baby-fruits-and-vegetables-22-jpg-images?ref=yr\\_purchase](https://www.etsy.com/listing/1704009895/baby-fruits-and-vegetables-22-jpg-images?ref=yr_purchase)

Roberts, M., Tolar-Peterson, T., Reynolds, A., Wall, C., Reeder, N., & Rico Mendez, G. (2022,

January 26). The effects of nutritional interventions on the cognitive development of preschool-age children: A systematic review. *Nutrients*.  
<https://PMC8839299/>

Ward, J., & Bailey, D. (2024, December 10). What is Agile Software Development?. Agile Alliance. <https://www.agilealliance.org/agile101/>

World Health Organization. (2023, December 20). Infant and young child feeding.  
<https://www.who.int/news-room/fact-sheets/detail/infant-and-young-child-feeding>

## 1.5 Overview

The remaining sections of this document are divided into two main parts: Overall Description and System Requirements. Section 2 provides a brief overview of BabyBites. Section 3 contains specific requirements, organized by feature.

## 2. Overall Description

An overview of the BabyBites system is provided in section two, summarizing its key functional capabilities and intended users.

### 2.1 Product Perspective

BabyBites is a mobile-first web application that supports parents and caregivers as their children transition from milk to purées and eventually to solids while also introducing utensil usage. BabyBites provides expert-backed nutritional resources along with features such as personalized baby profiles, a food tracker, a comprehensive food database and daily reports. By offering clear guidance on safe food introductions, preparation tips, and potential allergy or choking hazards, BabyBites helps reduce the stress and uncertainty often associated with early feeding transitions.

### 2.2 Product Functions

BabyBites allows parents and caregivers to create personalized baby profiles and use a food tracker to log both food and milk intake with timestamped entries, reactions and notes. A searchable food database provides age-appropriateness, preparation tips, allergen flags, choking-hazard guidance, and nutrition information. BabyBites also offers access to expert resources, sends configurable alert notifications, and generates daily reports that can be reviewed, exported, or shared.

### 2.3 User Characteristics

The intended users of the BabyBites application are parents and caregivers who are transitioning a child's diet from milk to purees or purees to solid foods, and those teaching early utensil use.

### 2.4 Constraints

N/A

### 2.5 Assumptions and Dependencies

N/A