

## **1. Introduction**

### **1.1 Scope**

This project involves creating, developing, and testing a database-driven e-commerce website for Turfies Exam Care Packages. The platform will enable the company to display its products online, accept custom orders, manage delivery, and improve the effectiveness of their order tracking system. The system is accessible from desktop and mobile devices (W3Schools, 2024).

### **1.2 Project Value**

The system will eliminate the current manual order-taking process, improve efficiency, and reduce human error. Turfies will also be able to reach a larger audience beyond its local network, which may result in increased sales and satisfied clients. Automating daily tasks will allow the team to focus more on marketing strategies and package quality (Chaffey, 2022; Wang, Zheng, and Sun, 2022).

### **1.3 Intended Use**

The website will make it possible for parents and students to view, customize, and order products online; for Turfies staff to add and edit products; and for order management and status updates. Both parties will receive email confirmations. It will include an easy-to-use admin panel for backend operations (GoDaddy, 2023).

## 1.4 Definitions and Acronyms

Term	Acronym	Full Definition / Explanation
User Interface	UI	The visual part of the website that users interact with, such as buttons, menus, and forms.
User Experience	UX	How easy and enjoyable the website is to use.
Content Management System	CMS	A tool to manage and update website content without coding knowledge.
Create, Read, Update, Delete	CRUD	The four basic operations used in databases.
PHP	—	A programming language used to handle dynamic content and server-side logic.
SQL	—	A language used to manage and retrieve data from databases.
HTML	—	The standard language used to create website structure.
CSS	—	A language used to style and visually design a website.
JavaScript	—	A scripting language used to make websites interactive.
Responsive Design	—	Ensures a website works well on phones, tablets, and desktops.
Database	—	A system for storing, retrieving, and managing data electronically.

## 2. Problem Definition

### Opportunity / Needs / Problems

Turfies currently uses manual ordering via WhatsApp. This causes:

- Lost information and delays

- No proper order tracking
- Limited customer reach

A digital ordering platform will solve these and support business growth (World Wide Worx, 2022; Takealot, 2023).

### Goals / Objectives

Turfies employees will be able to add and modify products on the website, while parents and students will be able to view, customize, and place online orders as well as manage orders and receive order status updates. Email confirmations will be sent to both parties. For backend operations, it will have an easy-to-use admin panel (GoDaddy, 2023).

### Procedure / Scope of Work

- Meet the client and conduct a student survey (Babbie, 2020)
- Create one prototypes (Figma, 2024)
- Develop frontend and backend (W3Schools, 2024)
- Test across devices (Google Developers, 2023)
- Host and deliver the final presentation (InfinityFree, 2023)

## 3. Requirements Analysis

### System Requirements

Hardware: Any browser-capable device

Software: Visual Studio Code, XAMPP, PHP 8+, MySQL, HTML/CSS/JS (Bootstrap, 2023)

### Functional Requirements

Function	Description
View Products	View packages with images and pricing
Customise Cart	Add/edit items before checkout
Place Order	Submit order with details stored in database
Admin Dashboard	Admin login to view/manage orders and inventory
Order Tracking	Users track orders via email or order number

Email Confirmation	Automatic emails after orders (Mailtrap, 2024)
Logout/Session Handling	Secure sessions and logout options
User Login/Register	Secure login with password encryption (OWASP, 2023)

External Interface Requirements

- User Interface: Mobile responsive, built with Bootstrap
- Admin Panel: Secure login, CRUD control for orders/products
- Forms: Login, registration, checkout
- Email System: Sends confirmation (Mailtrap, 2024)

Non-Functional Requirements

Category	Requirement
Performance	Page load time under 3s (Google Developers, 2023)
Security	Input validation, password hashing (OWASP, 2023)
Usability	Easy navigation, readable layout (Jakob Nielsen, 2020)
Availability	95% uptime expected during use (InfinityFree, 2023)
Maintainability	Admin can manage system without coding
Compatibility	Works on Chrome, Firefox, Safari, Edge
Accessibility	Alt text, scalable fonts, responsive buttons
Scalability	Can be extended with more features/products
Backup	Weekly data backups stored locally or online (Schwalbe, 2021)

4. Timelines & Budget

Schedule

Week	Task
Week 1	Assign roles, book client intro meeting
Week 2	Client feedback, run survey

Week 3	Create and present 2 UI designs (Figma, 2024)
Week 4	Finalise Deliverable 1, start backend setup
Week 5	Develop core functions
Week 6	Test all features
Week 7	Prepare documentation, user manual
Week 8	Submit files and give presentation

## Budget

Item	Description	Amount (ZAR)
Domain	.co.za domain registration	R500
Hosting	Shared server, email, SSL	R1,200
Printing & Filing	Colour and binding	R1,000
Data	Dev internet bundle	R600
Transport	Meetings, print errands	R400
Marketing	Posters, social posts, designs	R800
Contingency	Flash drives, reprints, extra docs	R500
Total		R5,000

## 5. Personnel Information

Name	Role	Responsibilities
Davey Machaka	Project Manager	Planning, scheduling, client meetings, timeline tracking, final presentation
Asher Duma	Support Contributor	Assist research, document editing, proofreading, testing
Jazacka Abdulmajeed	Backend Developer	PHP & MySQL, admin login system, backend logic, order management
Ntokozo Maseko	Frontend Dev & Secretary	UI design with Bootstrap, HTML, CSS, JS; group records; diagram support

## 6. Conclusion

The proposed approach provides a secure, scalable, and effective means for Turfies to digitize and enhance its operations. It reduces human labour, simplifies processes for clients, and provides the client with complete authority over their product and order

management (Chaffey, 2022; Kenton, 2022). The design is grounded on user feedback and assessed for efficacy and accessibility.

## 7. Sign-Off

**Project Title** Turfies Exam Care Packages E-Commerce Website

**Client Name** Turfies Exam Care Packages

**Team Name** Code Axis

**Client Representative:**

Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

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