



TOR for Programmer

1. Introduction

Maldives Hajj Corporation is seeking to hire a highly motivated and dedicated programmer to help develop a new system.

2. Objective

The objective of the programmer will be to assist our in-house IT team in the development process by coding, testing, debugging and follow up maintenance service post implementation for the new system.

3. Duration

6 months

4. Key Tasks

- Develop the new system as per the analysis and design provided by the IT team at MHCL
- Prototyping and relevant testing as required and planned schedule
- Providing constructive criticism for the changes required to be made from the perspective of the programmer.
- Study & understand the workflow and provide proper logical responses as needed
- Assist and mentor the inhouse IT team to manage the system post implementation and handover
- Work with the team to ensure the seamless development of the backend and frontend.
- Work with end users and internal staff for timely resolution of issues
- Provide proper information to the IT team in order to prepare the documentation accordingly.
- Documentation, and user guides in accordance with standards.
- Design and develop systems using TDD approach to development

5. Eligibility Criteria

- Bachelor's Degree (MQA Level 7) in Information Technology or related IT field.
- 4+ years of experience in programming (should include Java, PHP(Laravel) and VueJS/React Native)
- Solid understanding and experience in HTML5/CSS/JavaScript



- Strong background in industry best practices and modern design patterns
- Experience with Source Control (Git or TFS)
- Excellent communication skills

Added Advantage

- Master's in software engineering / IS related Specialization
- Strong programming background with knowledge in modular based programming and use of emerging trends.
- Good problems solving skills to address issues optimally with quick response timing
- Front end UI/UX designing is a massive advantage
- Working knowledge of REST/RESTFUL APIs
- In-depth understating of the SDLC
- Good writing skills in Dhivehi and English

6. Remuneration and other benefits

MVR 25,000 – 30,000 per month

To be paid based on the schedule and timely completion of assigned tasks and deliverables

- Pre-designed and finalized workflow that ensures minimal scope modifications
- In-house team to assist where and when necessary
- Physical attendance is not compulsory
- Flexible working with key focus on deliverables
- Possibility re-hiring for future modules development

7. Payment Schedule

- Upon completion of Prototype V1 – 15%
- Upon completion of Prototype V2 – 20%
- Upon completion Final Prototype – 20%
- Completion of Testing – 10%
- Successful Implementation and Go-Live – 15%
- Maintenance & Bug Fixes - 20%

8. Workhours estimation

- Total Estimate = 810 hrs (Approximately)
- Estimated Workhours per week: 40hrs (8 hours per day)



9. Reporting

- All working should be reported weekly to Project Manager with breakdowns where relevant.
- **NOTE:** Payment schedule will depend upon the reports + deliverables



Project Timeline & Deliverables

Stages	Duration	Deliverables
Pre-Coding Phase Preparations	40 hrs	Updated & Finalized Designs
Coding Phase 1 – Base System <ul style="list-style-type: none"> • Backend & Frontend • Database Creation & integration 	120 hrs	Prototype V1
Testing Phase 1 – Prototype V1 <ul style="list-style-type: none"> • Base System Testing • Stakeholders Feedback & Bug Fixing 	6 hrs	Revised & Updated Scope
Coding Phase 2 – Main Modules <ul style="list-style-type: none"> • Backend <ul style="list-style-type: none"> ○ Member Management ○ Trip Management ○ CRM ○ Application Management ○ Finance Management ○ Report Management ○ Raasthaa Management • Frontend <ul style="list-style-type: none"> ○ Members Registration ○ Member Profile Management ○ Hajj Service Management ○ Umrah Service Management ○ Kathilun Services Management ○ Training Services Management 	216 hrs	Prototype V2
Testing Phase 2 - Prototype V2 <ul style="list-style-type: none"> • Modules Testing • Stakeholders Feedback & Bug Fixing 	6 hrs	Revised & Finalized System
Coding Phase 3 <ul style="list-style-type: none"> • API Integrations • Auditing & Error Reporting Module • System Settings & Config Module • UI/UX Refining 	104 hrs	Final Prototype
Testing Phase 3 – Final Prototype <ul style="list-style-type: none"> • Full System with Migrated Data • Usability & Performance Testing • Stakeholders Feedback & Bug Fixing 	6 hrs	Fully Finalized System
Implementation Phase 1 – Change Management	4 hrs	Go-Live Ready system



<ul style="list-style-type: none"> • Change Management Plan • Go-Live Preparations 		
Implementation Phase 2 – Go-Live	16 hrs	Live & Functional System
Maintenance Phase - Major & Minor Bug Fixing	150 hrs	-
Support Phase - Training inHouse IT Team	50 hrs	-
Documentation	30 hrs	Complete Documentations

Tasks Breakdown (Detail)

#	Task
PROJECT KICKOFF	
Pre-Coding Phase Preparations	
1	Allocation of resources as per request of the development team
2	Finalize design of the new system to initiate Coding Phase
3	Setup of test environments to carry out modular testing
Coding Phase 1 - Backend (Base System)	
4	Develop the base system for the web application
5	Configure the view and content Management structure
6	Allocate structural capacity to introduce multiple modules
7	Create a Dashboard for Index view of the system
8	Construct the User Interface (for navigation purpose, requires to be refined later on)
9	Create an Error Log View
Coding Phase 1 - Frontend (Base System)	
10	Develop the base system for the web application
11	Configure the view and content Management structure
12	Allocate structural capacity to introduce multiple modules
13	Create a Dashboard for Index view of the system
14	Construct the User Interface (for navigation purpose, requires to be refined later on)
Coding Phase 1 - Database Creation & Integration	
15	Create a structural database based on the schema created from the system design
16	Identify the unique identifiers of each table
17	Ensure correct table to table relationships are established
18	Integration of DB to the current Base system developed
Testing Phase 1 - Prototype V1	
19	Current Base System design consolidation



20	Base system testing
21	Presentation of the base system to the Stakeholders for feedback
22	Compile feedbacks for revision of base system proposed by the stakeholders
23	Make changes to the base system accordingly
24	Make changes to the database (if required)
Coding Phase 2 - Backend (Member Management Module)	
26	General, Corporate & SDS Members Profile Management
27	General, Corporate & SDS Members Fund Management
28	Slot List Management (Hajj Specific)
29	Pension API Integration
30	Pension Funds Management (Pension Eligible Members)
31	Customer Hajj Account Management + General Scheme Account + Raastha Account
32	Customer Umrah Account Management
33	Customer Trainings Management
Coding Phase 2 - Backend (Trip Management Module)	
34	Trips Hajj & Umrah (CRUD Operations + View)
35	Trip Management with CRUD operations for both Trip Types
36	Trip Function "List" with SubAction(s): + View List + Download List + View Offers
37	Trip Function "Passport" with SubAction(s) + Collect/Release
38	Trip Function "Checklist" with SubAction(s) + Edit Items (CRUD Operations) + Issue/Check Items + Groups (CRUD Operation)
39	Trip Function "Bookings" with SubAction(s) + Flight (CRUD Operations + View) + Bookings (CRUD Operations + View) + Buses (CRUD operations + View)



40	Trip Function "Finances" with SubAction(s) + Room Sales (CRUD Operations + View) + Trip Transactions (View) + Receipts (View) + View Balances (View)
41	Trip Function "Trip Actions" with SubAction(s) + Edit Trip(CRUD Operation) + Close Trip + Regenerate Hajj List
42	Trip Function "Phone" with SubAction(s) + Check/Enter Number (CRUD Operation + View) + Visa Reader
43	Trip Function "Prints" with SubAction(s) + Passport Stickers + Hajj Card + Luggage Tag + Luggage Tag Large + Room Board + Pre-Travel info Sheet + Reference Letters + Agreements + Passport Data Page List + Bus List + Bus Numbers + Handbag Tag + Madina Check-in Card + Mahram Approval Document + Above 45 Document
44	Discount Management (Umrah)
Coding Phase 2 - Backend (Customer Relationship Management Module)	
45	Cases Management (CRUD Operation + View) + New Cases + View Cases + Groups



46	Classification Types for Cases + Call Inquiries + Client + Internal + Trip Related
Coding Phase 2 = Backend (Applications Management Module)	
47	Manage Applications (CRUD Operation + View)
48	Check & Verification options for Information Update Request Forms
49	Documents Attachment option
50	Today's Member Documents (view)
Coding Phase 2 - Backend (Finance Management Module)	
51	Payments Management (View) + Ageega Payments + Pending First Payments + Shop Transactions + Trip Specific Transactions + Training Payments + SDS Payments + Raastha Payments
52	Revision Requests (CRUD operations + View)
53	Transfer Management (CRUD Operations + View) + Credit Transfers from Account to Account
54	Collections Management (View) + My Collections Today (User Specific) + All Collections (Role Based)
55	BML Payment Gateway (View) + Online Payments through BML Portal
Coding Phase 2 - Backend (Reports Management Module)	
56	Standard Reports (Fixed Templates) + Financial Reports + Corporate Reports + Operational Reports
57	Customized Reports (Multiple Custom Filters)
58	Audit Repots + Logs (with filters) + Custom Reports



59	Raasthaa Reports + Raastha Plans + Raastha Fund Management + Raastha Stats
Coding Phase 2 – Backend (Raastha Module)	
60	Raastha Fund Management
61	Raastha Slot Management
62	Raastha Control Management
Coding Phase 2 - Frontend (Member Registration Module)	
63	Signup/Registration Form Customer Portal
64	Digital Form for Registration
65	Add DNR API to introduce DNR Verification of the Customer
66	Opt Customer to Register to either Hajj/Umrah Service
67	Add T&C with Consenting "Agree & Disagree" Button to complete registration
68	Send Customer Instant SMS once Agreed and Registration is complete
69	SMS Customizer to available for Administrator
Coding Phase 2 - Frontend (Member Profile Management Module)	
70	Add Profile Management of Customer (CRUD Operation + View)
71	Permanent Information of Customer(view)
72	Permanent Information requires customer to submit a form to edit the Information
73	Current Information of Customer (Edit + View)
74	Current Information is editable when customer wishes
75	Document Upload Function to be Available + ID Card + Passport Copy + Others
Coding Phase 2 - Frontend (Hajj Services Management Module)	
76	Registration Option at Portal Registration or Once Signed in
77	Digital Form for Hajj Registration (General Scheme or Raastha)
78	Additional Hajj specific Information Digital Form Submission
79	Add T&C with Consenting "Agree & Disagree" Button to complete registration
80	Documents Attachment option (if required)
81	Synchronize with Backend to create Member Account with Hajj Fund
82	Make Payment to Hajj Account
83	Payments to be Verified from Backend before Crediting into Account



Coding Phase 2 - Frontend (Umrah Services Management Module)	
84	Registration Option at Portal Registration or Once Signed in
85	Digital Form for Umrah Registration
86	Additional Umrah specific Information Digital Form Submission
87	Add T&C with Consenting "Agree & Disagree" Button to complete registration
88	Documents Attachment option (if required)
89	Synchronize with Backend update Umrah Pilgrim Member Profile
90	View List of "Open" Umrahs with Package Prices
Coding Phase 2 - Frontend (Kathilun Services Management Module)	
91	Registration for Ageega, Sadhagaath or Others through Digital Form
92	Child or Children Information to be filled (only in Ageega)
93	Select the Number of Goats
94	Add T&C with Consenting "Agree & Disagree" Button to complete process
95	Payment Option with Summary
96	Redirect to BML Payment Gateway
97	Payment State to be Synchronized with Backend
Coding Phase 2 - Frontend (Training Services Management Module)	
98	List of Open Trainings
99	Registration Function to the training through Digital Form
100	Number of Slots to reserve
101	Add T&C with Consenting "Agree & Disagree" Button to complete process
102	Payment Option with Summary
103	Redirect to BML Payment Gateway
104	Payment State to be Synchronized with Backend
Testing Phase 2 - Prototype V2	
105	integration of all Main Frontend & Backend Modules
106	Database Integration to all corresponding Modules
107	Module testing, Usability Testing & Synchronization Testing
108	Full Workflow Testing of All Modules
109	Compile Results of testing and address found issues
110	Presentation of the system to the Stakeholders for feedback
111	Compile feedbacks for revision of system proposed by the stakeholders
112	Make changes to the system accordingly
113	Make changes to the database (if required)
Coding Phase 3 - API Integrations	
114	Integrate BML Payment Gateway API for Online Payment Option



115	Integrate DNR API to full System
116	Integrate Pension API to Manage Pension fund-based Hajjs
Coding Phase 3 - Auditing Module	
117	Track changes made by users
118	Track all transactional actions
119	Track all critical actions
Coding Phase 3 - Error Reporting	
120	Collect all error types thrown by the system
121	Alerts & Notifications of errors
Coding Phase 3 - System Settings & Configurations	
122	Adjustable rates for all services provided
123	Adjustable application specific settings
Coding Phase 3 - Compatibility	
124	To enable multi browser compatibility
125	To enable mobile view compatibility
Coding Phase 3 - UI/UX Refining	
126	Refine User Interface based on feedbacks received and Prototypes testing
127	Ease of Access to an Optimized Workflow
128	Simplify Service Rendering
129	Simplify Service Provision
130	Understandable Navigation
131	Enhanced Usability for challenged People
132	Reduce Load times & error
133	Reduce Workflow Redundancies
Coding Phase 3 - Security	
134	Optimize Security measures of the system
135	Integration enhanced validation functions where appropriate
136	Secure communication between Frontend & Backend
Data Migration to new DB	
137	Extract all data in the old system
138	Restructure all data into a proper template
139	Load the data onto New Database
140	Check & Verify is migrated data is properly integrated
Testing Phase 3 - Final Prototype	
141	Integration of all Modules, Functions & Services
142	Ensure availability of all resources and data



143	Deploy on testing environment for User Testing
144	Have users feed test data into the system both from the frontend and backend
145	Check if the system is performing as needed
146	Check accuracy of data communicated from frontend and backend
147	Collect user feedbacks to address all bugs
148	Fix the bugs in the system
149	Present the system to the stakeholders
150	Get signoff consent to Go-Live with new system
Implementation Phase 1 - Change Management Plan	
151	Prepare implementation schedule
152	Prepare implementation approach
153	Prepare resources for Go-Live Date
154	Notify all users of the System Changeover
155	Ensure Contingency plans are in place
156	Prepare Rapid Support Team to tackle issues
Implementation Phase 2 - System Implementation	
157	Take old system offline
158	Go-Live with new system
159	Ensure helpdesk and support is on standby
Maintenance Phase - Major & Minor Bug Fixing	
160	Helpdesk Support & Minor Bug fixes
161	Identification of possible flaws & Carry out Major Bug Fixing
162	Further Refining existing system on areas that can be improved
Support Phase - Training inHouse IT Team	
163	Provide training on development support of the system (i.e., bug fixing, refining & version upgrading)
164	Provide training on technical maintenance of the system (i.e., API Management, Data Updating, Backup & Archive Support)
Documentation	
165	Prepare documentation of the full system accordingly
166	Documents update frequency should be phase by phase
167	Source Code of the Software (Original)
168	Manual Documentation (Users & Admin)
PROJECT HANDOVER AND CLOSURE	