Scope Of Work

For

Appointment Scheduling System, Website Portal and Web Content Management System

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Revision History

Revision	Date	Author	Reviewer	Approver	Item/SectiCollege of Nursingon	Changes
Appointments Booking section on website	29/06/2024	Tanmay Mishra	Mihir Dash		Website Section	Appointments Booking Section was added to website part
Appointments Management System	29/06/2024	Tanmay Mishra	Mihir Dash		New Module Development	Appointments control panel addition and appointments display addition
SSL, Security Audit and other sections in website section	16/07/2024	Tanmay Mishra	Mihir Dash		Website Section	Additional information provided.
College of Nursing	16/07/2024	Tanmay Mishra	Mihir Dash		College of Nursing Section	Addition of a separate website for the college of Nursing under the main website
Website (Research Section and multi lingual support)	01/08/2024	Tanmay Section	Mihir Dash		Website	Addition of details to research section and multilingual support
Addition of new functionalities to website post discussion with AIIMS team	13/08/2024	Tanmay Mishra	Mihir Dash		Website	Splash screen, announcement,publish date, document name, google search

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1 WhatsApp based Registration and Appointment Scheduling System

1.1 Introduction

1.1.1 Purpose

The purpose of this section of the document is to identify the scope of work for the project which would address the issue of queueing at the AIIMS Mangalagiri OPD counters and to implement the relevant solution of addition of a patient registration and appointment scheduling system to reduce the queuing at the OPD counters as well as to create a digital trail of the patient in the form of **WhatsApp Based Patient Registration and Appointment Scheduling System.**

Specifically, this document aims to:

- Provide a clear understanding of the intended application for what is being requested.
- Present a final and unambiguous statement of relevant functional, non-functional, and other miscellaneous requirements relating to the implementation of WhatsApp based Patient Registration and Appointment Scheduling system.
- Obtain stakeholder sign-off.

1.1.2 Problem Statement

The problem of	The excessive queueing at the Registration/Appointment counters and the OPD (department) counters of AIIMS Mangalagiri.
Affects	Queue management efficiency and staff morale at the above-mentioned counters and also delays the timely delivery of healthcare services.
A successful solution would	Allow the patient to self-register himself/herself using a WhatsApp based Registration and book the appointment for himself/herself
The impact of which would lead to	An improved queue management due to reduced queueing of the patients at the registration counter leading to improved staff productivity and morale.

1.1.3 Scope

Below is the scope list of the solution for the **WhatsApp Based Patient Registration and Appointment Scheduling System**

In Scope:

The system has a single user type i.e. "Patient". The system shall be designed to collect the information from the patient through a set of questions designed for the same purpose and register the patient(if desired) and generate an OPD appointment for him/her at AIIMS Mangalagiri

Feature List
1) Patient Registration including integration with CDAC system for CR number generation and pushing the registration data
2) Appointment Scheduling/Re-Scheduling
3) Payment gateway integration for payment for the appointment (SBI e-pay gateway)
4) Appointment slip generation
5) Guided navigation of patient to the respective department through video.

Out of Scope:
Any point which is not included in the **'In-Scope'.**

1.1.4 Definitions, Acronyms, and Abbreviations

Acronyms / Abbreviation	Expansion/ Definition
AIIMS	All India Institute of Medical Sciences
CR No.	Central Registration Number
DOB	Date of Birth
HMIS	Hospital Management Information System
WCMS	Web Content Management System

1.2 Assumptions and Dependencies

The following assumptions and dependencies relate to the capabilities of the system:

- The HMIS system and the WhatsApp registration and booking system need to be integrated to be able to push and pull the details to and from the HMIS as required.
- The timeline for the payment gateway integration would depend upon the approval processes set by SBI.

2 Website and Web Content Management System

2.1 Introduction

The broad scope of work in this part of the project would include the understanding of the requirements, designing, planning, development, testing, delivering and launching of a fresh new website for AIIMS, Mangalagiri and maintaining the same for three (03) years. The content management system will be with <mark>Multilingual support (English, Hindi and Telugu).</mark>

The time for completion of the design and developmental work shall be 60 days from the date of issue of the letter of award. The maintenance period will be of three (03) years from the date of final commissioning of the new website.

2.2 Website

2.2.1 Information Collection

1) The vendor shall be required to present several design templates, out of which some templates will be selected with/without suggestions for changes which the bidder shall have to incorporate. AIIMS, Mangalagiri reserves the right to amend/ add/ delete/ edit any content for the website. The desired navigation structure, general functionalities and reference points for the design will be discussed with the successful bidder prior to commencement of the work.
2) The vendor will have to depute persons for the collection of information slash/pictures/videos/data etc. from the existing website www.aiimsmangalagiri.edu.in and social media accounts initially. Once the website is commissioned, routine updation of the information will be the responsibility of the AIIMS, Mangalagiri. However, the agency is supposed to inform the AIIMS, Mangalagiri IT Team about the updates that must be made during the maintenance period.

2.2.2 Compatibility

1) The website design must be cross-browser and cross-OS compatible up to the most recent browser/OS versions. Support for three platforms (Desktop/Tablet or Notebook and Mobile) form factors should be ensured.

2.2.2 General Requirements for the Website

a. Extended Validation and Wildcard SSL Certificates for 3 Years. Post Implementation Support and training for Three Years

b. The entire dynamic website should be based on the latest and Open Source web technology like Wordpress/.NET with a backend Web Content Management System (WCMS).

c. The website should comply with all of the GIGW guidelines and W3C Standards.

d. To provide clearance of website from CERT-In empanelled agency or any Government of India Agency for security audit certificate/safe to host certificate and STQC Certification.

e. The Website will be hosted on the NIC server. AIIMS reserves its right to change host to Local server/cloud/any other hosting during the contract period. The vendor has to coordinate NIC/other server space hiring and shift the contents without hampering already running Google Workspace services, and NIC email services and the final quote to be inclusive of all of these costs.

f. The website should be built in such a manner so that authorized officials can easily maintain the respective section's content themselves. The back-end CMS should have respective logins for content creation, moderation, approver & publisher. The web administrator should have the provision for creating department-wise sub-admins etc.

g. The vendor has to share source code of the website with AIIMS as and when the development, delivery and maintenance period is closed.

h. All material/product and related codes would be property of AIIMS and the vendor would have no claim over the same in future.

i. All contents should be stored and kept confidential and the vendor shall not reuse/ replicate/transfer the same to anyone else.

j. Design and Layout: The website should be well-designed with light colors, a neat, un-cluttered look and a user-friendly, easy-to-navigate layout. The vendor should refer to various other AIIMS websites to design and develop the AIIMS website.

k. The Vendor has to do the maintenance of the Website for a period of three years from the date of commissioning of the website which will include debugging of the website on their own as well as when reported.

l. Special Features for Access to the Persons with Disabilities (Divyangs):Add Images with Alt Text, Allow Users to Enlarge Font Sizes, Contrast Sensitivity, Keyboard Navigation, Video and Multimedia Access, Descriptive URLs, ARIA (Accessible Rich Internet Applications)

m. SEO, Visitor counter, Banner management, Advanced analytics, Backup and transfer option from one server to another if required. Daily incremental and Monthly full backup must be made. The vendor should be able to revert to any monthly back up if and damage or attack to or on website/database occurs due to any reason. Recovery of website is a must requirement.

n. The website must have multi lingual support with field level support/input and labels provided for the three languages of English, Hindi and Telugu.

o. Splash screen functionality is needed. The splash screen has to be placed prior to the home page and information as shared by AIIMS shall be added to the splash scree. A button redirecting the user to the home screen of AIIMS should also be present in the same splash screen page.

p. Flash notification for announcement section is needed, where latest announcements as configured by AIIMS Mangalagiri shall be displayed from time to time.

q. Publish date(field) need to be displayed in the recruitment and procurement section and also has to be added to the theme.

r. Document name(field) need to be displayed in recruitment and procurement corrigendum and the same needs to be added to the theme as well.
s. Search functionality based on Google search need to be added to the website.

2.2.4 Appointment Booking Section

a. The vendor shall provide an appointment system for the patients visiting the AIIMS OPD care.
b. The appointment system must be designed in a dynamic way which would enable the institute to shift a percentage of the appointments to the online portal.
c. The appointment system must take into account the number of doctors available as per the schedule to generate the appointments in advance and allocate a part of the same for online appointments.
d. The system should also be implemented in a way that tokens would be allotted serial wise for each appointment and both the online or offline appointments shall carry a token number associated with it.
e. The appointment portal shall be listed on the newly created website under the appointment section of the website.
f. The vendor shall also provide link for the Online Registration System.

2.2.5 Research Management System (Research Section)

a. Registration of students/faculty researchers with OTP based validation mechanism.
b. Post Validation receiving the research proposal data through individualized form. Capture of data including images with a summary page. PDF creation.
c. Each person can submit multiple proposals. The proposals have to go through an approval mechanism. Each Proposal can be updated as accepted/modification required/rejected as decided by the dean of research.
d. Summary and notes against each proposal and each person can be obtained in the background.
e. Login functionality is to be provided for secure login to the system.
f. Workflow to be designed for approval of the login ID and password of the staff, teaching staff and student by the dean of research of the institution.
g. The researcher should be able to submit a new application with an edit and view access for the same.
h. The submitted research thesis would pass through an approval mechanism with the system segregating the same as complete, incomplete and rejected stage flow.
i. The system should also have a research upload functionality along with functionality to upload all the certificates related to the research.
j. The system must have a certificate of completion of research functionality which would enable the researchers to download the completion of research certificate.
k. The system must have functionality to send Email and SMS for account verification purposes.
l. The system must provide for a user role management module within the application, which would enable the administrator to manage the role of a user as required by the institute.

2.2.6 Tender/NIQ section

a. Dynamic displaying of data with automatic connection to GeM portal links along with internal linking to What's New/Front page.
b. Mechanism to highlight corrigendum/addendum in old running Tender/NIQ for better visibility

2.2.7 General Notices Section

a. Dynamic displaying of data with automatic connection with internal linking to What's New/Front page.
b. Mechanism to highlight corrigendum/addendum in old running notices for better visibility.

2.2.8 Other Sections

a. About Institute - Information regarding Ministry, Officials, Committees etc. Shall also contain the Organization tree structure of the institution.
b. Links to Employee login/Student login/Patient portal/Procedure /HMIS/App, Health Insurance related information etc.
c. Departments' section - Details like, faculty details, images, seminar, workshop, conference pages
d. Library and Journal section- e access, Catalogue, e Magazines
e. Hostel – related information
f. Media - Social Media Integration, Upcoming and old Events/Calendar, Video/Image gallery
g. Feedback/Complaint/Grievance redressal section with email acknowledgement.
h. A scrollable notifications section displaying the notifications for vacancies for the recruitment process.
i. Academic section which will also contain the Who's Who along with the students sub section and academic examination research subsections.
j. Twitter Feed is to be added to the website.
k. The notification section must contain the BMW link. It should display the BMW notifications on clicking.

2.3   Website Content Management System

2.3.1 General Requirements for Website Content Management System

a. Facility to update content by multiple users from anywhere through a browser based administrative module using WYSIWYG (what you see is what you get) editing tools allowing non-technical users to create and edit content.

b. Multilingual content – Ability to create content in multiple languages. It is expected that the basic site will be in English and Hindi. If content is not translated, the link should show English content by default.

c. The WCMS software shall be able to include plug-ins or modules that can be easily installed to enhance the functionality.

d. WCMS systems should support user groups, allowing the administrator to control how registered users interact with the site. A page on the site can be restricted to one or more groups.

e. The WCMS site shall also be able to create microsites/web portals within a main site for events like conference and CME.

f. WCMS software shall act as a collaboration platform allowing content to be retrieved and worked on by one or many authorized users. The changes can be tracked and authorized for publication or ignored reverting to old versions. It shall allow multiple users to modify (or comment) a page at the same time in a collaboration session.

g. Admin section must be protected by username and password with the help of proper security mechanisms. At database level password should be stored in encrypted format. After consecutive wrong attempts, the password should be emailed to the administrator.

h. The bidder will provide an operational guarantee on the WCMS design and support for at least three years after the website's launch so that modification can be made, if AIIMS, Mangalagiri finds that website is not fulfilling its needs or if further improvements are required. All troubleshooting required would be the responsibility of the bidder.

2.3.2 Dynamic News/Events/Notification Management System

Facility to manage Departmental News/Events/Notification through an administrative control panel. The Administrator can upload pictures/videos/documents etc. of the various events. The facility to search news via a strong search engine, facility to manage news/event write-up/contents by multiple users from anywhere through browser based administrative modules using a WYSIWYG editor.

2.3.3 Dynamic Photo gallery/Video Management System

Facility to manage photo gallery via an administrative control panel, facility to create photo gallery category dynamically. i.e. add/edit/delete photo gallery categories, facility to upload new pictures to these categories along with caption, facility to manage pictures and caption.

2.3.4 Database Management

Ability to create a new database and user interface to display dynamic content from the database.

2.3.5 Menu Management

Ability to add, move, delete, modify menus on the site.

2.3.6 Miscellaneous

Design should allow changing the interface templates for a fresh new look, creation or linking of new pages, Login facility etc. as and when required. Extensive training should be provided to the AIIMS, Mangalagiri IT Team to handle the routine web content related to WCMS.

3 Website of the College Of Nursing

1. The college of Nursing shall have a separate website, which shall be developed by the vendor,'
2. The website shall have main sections regarding a) the Institute, b) the academics, c) Research, d) Activities, e) Contact us, f) Photo Gallery and g) New Notifications.
3. The institute section shall have sub sections like the introduction, the vision, the mission, the philosophy, the future plans, the infrastructure, the principal's desk and the student's corner.
4. The Academics section shall have sub sections such as the courses (having an outline of the various courses taught at the institute), the curriculum, the academic calendar, the admission process, the faculty, the internal committee and the examination corner which shall again contain the scheme of the examination, the rules of the examination as well as well as the results of the examination.
5. The research section shall have sub sections such as the extra mural projects, the intra mural projects funded, the departmental projects and the publications which would include the research papers and the textbook and chapters.
6. The activities section shall have the workshop/seminar/conference sub section along with other sub sections like the student welfare, the faculty welfare and the outreach activities.
7. The contact Us section should also have a sub section containing the contact details of the PA to the college principal.

4. Appointments Management System

4.1 Appointments Control panel

a. The vendor shall design, implement and maintain an appointments control panel.
b. This panel shall contain all the appointments and tokens generated through online appointments (through website and WhatsApp).
c. The panel must act as an information panel for online appointments.
d. The panel must show the open appointments, closed ones and rescheduled/cancelled ones as well.
e. The panel must allow for token printing for offline appointments which would enable the patient to keep track of his/her token.
f. The appointments management system must display the token for the online channel of appointments through the respective channels.

4.2 Appointments Tracking Panel(display)

a. The vendor needs to create appointments display panel to display the appointment tokens and their flow in the queue on a screen near the OPD counters.
b. The panel should be visually attractive and provide the token numbers and their sequencing as per the current wait times.

4.3 Configuration Panel

a. The configuration panel shall be used by the administrator to configure the appointments management system as per the requirement of AIIMS.