



DIGITALIZATION OF POST GRADUATE TRAINING PROGRAM

Rawalpindi Medical University and Allied Hospitals

By:

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DOCUMENT INFORMATION

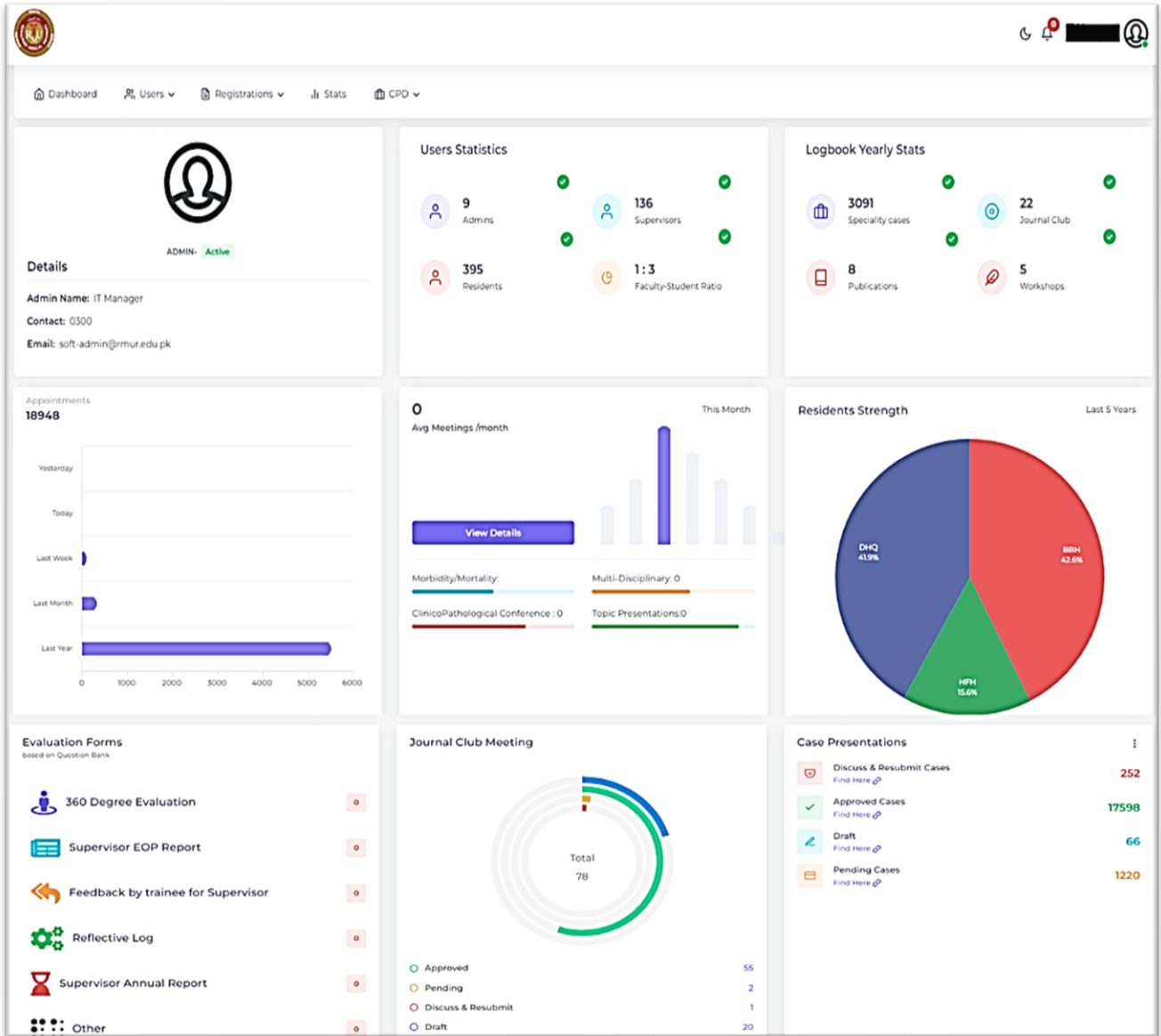
Document Title	Digitalization of Post Graduate Trainee Program Logbook System.
Owner	Director IT
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Status	Approved
Prepared by	Mrs. Afza Kazmi, Developer (Software & Web)
Approved by	Vice Chancellor
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Classification	Rawalpindi Medical University

TECHNICAL PROPOSAL

Problem Statement	<p>This proposal outlines the plan to develop a comprehensive software solution designed to enhance the research, data analysis, and academic capacity of the Post Graduate Trainee program at Rawalpindi Medical University. The proposed software will integrate various functionalities to support research activities, streamline data management, and improve academic performance tracking. This document details the project objectives, scope of work, technical approach, implementation strategy, timeline, budget, and risk management.</p>
Scope of Work	<p>PGT Portal will provide users with faster and easier access to Logbook features while offering value-added content to increase session duration and reduce bounce rate. From here, the system's detailed objectives could include the following:</p> <ul style="list-style-type: none"> • Create a new, engaging web design for an existing logbook. • Role based dashboards to provide access to the most frequently needed information in an interactive user environment. • Statistical representation of user content will make the content more readable. • Retain existing brand identity and requirements. • Optimize website performance for a better user experience.
Objectives	<ol style="list-style-type: none"> 1. Enhance research capabilities through integrated tools and resources 2. Streamline data management and analysis processes 3. Improve tracking of academic performance and progress 4. Facilitate better communication and collaboration among trainees, mentors, and faculty. 5. Support data-driven decision-making through comprehensive reporting and analytics.
Technical Specifications	<p>The CMS is built on a multi-tier architecture, consisting of:</p> <ol style="list-style-type: none"> 1. Presentation Layer: The user interface, accessible via web browsers and mobile applications. 2. Application Layer: The core functionality, including business logic and process management. 3. Data Layer: The database management system (DBMS) that stores and retrieves data. <p>The system uses a combination of technologies such as:</p> <ul style="list-style-type: none"> • Front-end: HTML, CSS, JavaScript, and modern frameworks like Bootstrap. • Back-end: Server-side languages PHP and modern framework like Yii 2. <p style="text-align: center;">Database: Relational databases like MySQL maria DB.</p>
Implementation Plan	<p>Phase 1: Planning and Requirement Analysis</p> <ul style="list-style-type: none"> • Conduct stakeholder interviews to gather detailed requirements • Define project scope, objectives, and deliverables

	<ul style="list-style-type: none"> • Develop a detailed project plan with timelines and milestones <p>Phase 2: System Design</p> <ul style="list-style-type: none"> • Design the system architecture and data models • Create wireframes and prototypes for user interfaces • Define integration points with existing systems <p>Phase 3: Development and Testing</p> <ul style="list-style-type: none"> • Develop system modules using Agile methodology <ul style="list-style-type: none"> ◦ Research Management Tools ◦ Data Analysis Module ◦ Academic Performance Tracking ◦ Collaboration and Communication Tools ◦ Reporting and Analytics • Conduct unit, integration, and system testing • Perform user acceptance testing (UAT) with a group of end-users <p>Phase 4: Deployment and Training</p> <ul style="list-style-type: none"> • Deploy the system in a staged approach (e.g., pilot phase followed by full rollout) • Provide training sessions for users • Offer ongoing support and maintenance
<p>Risk Management</p>	<p>Potential Risks</p> <ul style="list-style-type: none"> • Requirement Misalignment: Misunderstanding of stakeholder needs • Technical Challenges: Unforeseen technical issues during development • Budget Overruns: Costs exceeding estimates • Timeline Delays: Project phases taking longer than planned <p>Mitigation Strategies</p> <ul style="list-style-type: none"> • Conduct thorough requirement analysis and regular stakeholder meetings • Employ experienced developers and conduct regular technical reviews • Maintain a contingency budget and monitor expenses closely • Implement Agile methodology to ensure flexibility and timely adjustments

Dashboard for quick data Analysis.



Resident/PG Trainee Panel

resident

Dashboard
Account
CPD

My Profile

Username: ██████████ resident
 RTMC: ██████████
 Supervisor: ██████████
 Program: Urology
 Hospital: BBH- Benazir Bhutto Hospital

Current Month Statistics

0
Cases

0
Rotation Cases

0
Journal Club

0
Workshops

0
Lectures

0
Meetings

Multi-Source Feedbacks Ratio

Based on various categories

MSF Distribution

100%

● 360 Evaluation
 ● Trainee Feedback
 ● Reflections

Logbook Summary

	PENDING	APPROVED	DRAFT	DISCUSS & RESUBMIT	TOTAL
Appointments	0	60	0	0	60
Speciality Training	0	80	0	0	80
Rotations Training	0	0	0	0	0
Journal Club	0	0	0	0	0
Workshops	0	0	0	0	0
Publications	0	0	0	0	0

My Appointments 60

Add Appointment

Show 10 entries

SR.NO	PATIENT NAME	CONTACT NO	APPOINTMENT DATE	STATUS	ACTIONS
1	Imran Khan <small>Patient# 2319</small>	03125889157	12 Mar, 2022	Approved	

Resident Rotation Planner Add Rotation

Below list provides the stations where resident performed discipline wise clinical rotations

PAEDIATRIC SURGERY
2019-03-01

Active
HPH

Supervisor Panel

supervisor

Dashboard
Account
CPD

Details

Username: ██████████
 Contact: ██████████
 Email: ██████████
 RTMC: ██████████
 Designation: Professor
 Department: Department of Paediatric
 Teaching Hospital: BBH- Benazir Bhutto Hospital

Generic Info

Updated 1 month ago

No record
Training Summary

No record
CME Credits/Certificates

No record
Workshop Feedbacks

No record
Lectures Delivered

360 Degree

Past
0

Present
0

Trainees Feedback

Recieved
0

In Progress
0

Supervisor Reports

Annual
0

EOP
0

DOPS

Draft
0

Submitted
0

Case Based Clinical

Draft
0

Submitted
0

Patient Medical Record

Draft
0

Submitted
0

General Logbook

RESIDENT INFO	CASES	JOURNAL CLUB	PUBLICATIONS	MEETINGS	PROCEDURE SKILLS	WORKSHOPS	GRAND TOTAL
██████████	Pending: 0 Discuss: 0 Total: 69	Pending: 0 Discuss: 0 Total: 0	Pending: 0 Discuss: 0 Total: 0	Pending: 0 Discuss: 0 Total: 0	Pending: 0 Discuss: 0 Total: 0	Pending: 0 Discuss: 0 Total: 0	69









Rotations Logbook

RESIDENT INFO	CASES	JOURNAL CLUB	PUBLICATIONS	MEETINGS	PROCEDURE SKILLS	WORKSHOPS
██████████						

Logbook Summary Previous Residents

RESIDENT NAME	CASES	ROTATIONS	JOURNAL CLUB	PUBLICATIONS	GRAND TOTAL
██████████					

Rotation Logbook Management


 <p>Emergency Cases Cases related to prehospital care, disaster preparedness and response, acute medical and paediatric emergencies, critical care, sports medicine, wound care, and toxicology.</p> <p style="text-align: center;">≡ List</p>	 <p>OPD and Clinics Residents should demonstrate expertise in diagnosis and management of patients in acute care clinics and longitudinal clinic</p> <p style="text-align: center;">≡ List</p>	 <p>Indoor Memorable cases seen in and managed in the medical ward/CCU along with comments of the supervisor should be mentioned in this section</p> <p style="text-align: center;">≡ List</p>	 <p>Journal Club A resident present a research article of his/her choice of actual or potential broad interest and/or application. Discussions of any current articles/topics introduced by any participant.</p> <p style="text-align: center;">≡ List</p>
 <p>Mortality and Morbidity Meetings The MMM Conference is held occasionally at noon throughout the year. A case, with an adverse outcome, though not necessarily resulting in death, is discussed and thoroughly reviewed.</p> <p style="text-align: center;">≡ List</p>	 <p>Multi Disciplinary meetings(MDM) A multi-disciplinary team meeting (MDT) is a weekly or monthly meeting that takes place between health care professionals, to discuss individual patient cases</p> <p style="text-align: center;">≡ List</p>	 <p>Procedural Skills Residents perform procedures :Observed(O), Assited(A), Performed under supervision(PUS), Performed Independently(PI) during rotations.</p> <p style="text-align: center;">+ New</p> <p style="text-align: center;">≡ List</p>	 <p>Workshops/Hands on Training Resident achieves hands on training while participating in mandatory workshops of Research Methodology, Advanced Life Support, Communication Skills, Computer & Internet and Clinical Audit.</p> <p style="text-align: center;">≡ List</p>

Logbook Summary

Logbook Summary 286

RESIDENT NAME	SUPERVISOR NAME	🔒 CASES	🔒 ROTATION CASES	📖 JOURNAL CLUB
TAYYABA MALIK	Abeera Zareen	Pending: 0 Discuss: 0 Total: 10	Pending: 0 Discuss: 0 Total: 0	Pending: 0 Discuss: 0 Total: 0
MUHAMMAD NOMAN ASLAM	Abeera Zareen	Pending: 0 Discuss: 0 Total: 19	Pending: 0 Discuss: 0 Total: 0	Pending: 0 Discuss: 0 Total: 0
MUHAMMAD JAWAD AWAN	Fuad Ahmad Khan Niazi	Pending: 33 Discuss: 0 Total: 118	Pending: 3 Discuss: 0 Total: 3	Pending: 0 Discuss: 0 Total: 0
AHMAD BILAL	Jawad zahir	Pending: 0 Discuss: 0 Total: 62	Pending: 0 Discuss: 0 Total: 0	Pending: 0 Discuss: 0 Total: 0
MUHAMMAD ZEESHAN TARIQ	Mohammad Ali Khalid	Pending: 68 Discuss: 0 Total: 68	Pending: 7 Discuss: 0 Total: 7	Pending: 0 Discuss: 0 Total: 0

Supervisor Details X



Professor

Mohammad Ali Khalid

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drkhalid62@yahoo.com

- 👤 Active / Passed Residents
1/1
- 📁 Pending Speciality Entries
68
- 📁 Approved Speciality Entries
0
- 🔄 Pending Rotation Entries
0
- 🔄 Approved Rotation Entries
72
- 🕒 Last Login
01 Jan, 1970



SUMMARY OF SYSTEM IMPLEMENTATION AND IMPACT ANALYSIS

System Title	Digitalization of Post Graduate Trainee Program.
Implementation Status	Successful
Implementation Date	May 05, 2022
Proposed by	RMU IT Team
Application Specification Areas	Software Engineering, SDLC, Programming Logic, Coding, Application Framework, RDBMS, Software Development.
Supervised by	Hafiz Shahid Rasool (Director IT)
Target Users	PGRs/PGTs, Supervisors, URTMC, Research Dept, QEC Dept, ORIC.
Impact Area	Public Sector University (Government of Pakistan)
Current Status	Implemented
Executing Department	Department of Information Technology
Impact Analysis & Conclusion	<p>The successful implementation of specialized research software for the postgraduate trainee program at marks a significant milestone in enhancing the research and innovative capacity of our institution. This analysis highlights the positive outcomes, improvements, and potential long-term benefits derived from this initiative. The implementation of research software for the postgraduate trainee program at Rawalpindi Medical University has yielded significant positive impacts, improving research efficiency, quality, collaboration, and innovation capacity. These advancements not only benefit the trainees but also contribute to the overall growth and reputation of the university as a hub for cutting-edge research and innovation. Continued investment in such technological solutions will be crucial for sustaining and enhancing these benefits in the long term.</p>