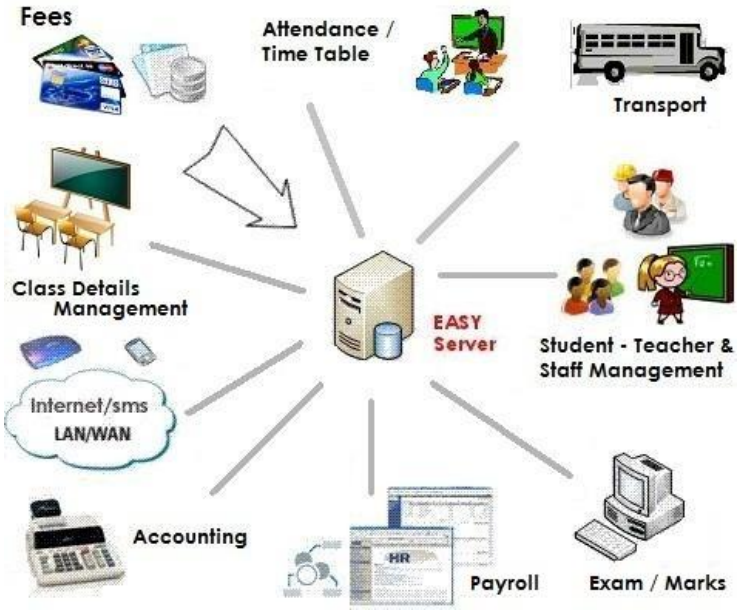
Integrated University Management System (IUMS)

to digitize the operations of

Govt. Universities, Govt. Colleges

&

Private Universities / Colleges


Fees
Attendance / Time Table
Transport
Class Details Management
EASY Server
Student - Teacher & Staff Management
Internet/sms
LAN/WAN
Accounting
HR
Payroll
Exam / Marks

Platform for Sharing Information between Stakeholders
Students
Administrator
Alumni
Management
Parents
To ensure
Transparency in administration at all levels
Accountability in the system
Improvement in the quality of education management
Easy access to a comprehensive reports center
Teachers
Corporate
Corporate

4 Quadrants of Smart Cashless Digitized University Project

Students / Parents: -> Online Forms (Adm / Exam / Reval) -> Online / Cashless Fees -> Online Receipts -> Online Certificates Request(Bonafide) -> Online Attendance (Aadhar based) -> eLectures -> eBooks / eLibrary -> eTime-Table	**University Administration:** -> Online Admission with college centralisation / Online Attendance -> Cashless Fees / Receipts / Payments -> Centralized Student Database -> Secure & Centralised eExams -> Cashless salaries / payments -> eProcurement -> University – Affiliated College integration
Staff / Teachers: -> eLectures -> Online Collaboration -> eTime-Table -> Online Teacher / Staff -> Cashless salaries / payments -> Online Leave,Pension,PF	**State Government:** -> Accurate online Data Availability -> Real time monitoring -> Easier SOS handling -> 360 degree Transparency -> All processes 100% online & cashless -> Real time across the state integrated University / affiliated college data available at the click of a button.

Value Proposition on the Integrated University Management System IUMS

- Award winning Technology University Management System which is also endorsed by the likes of Microsoft, Amazon & Paytm.

- It is a Multi university, multi college, multi campus based system.
- Codeless Software application accessible from anyplace anywhere.
- Built with online gateway and approval workflow to make paperless automation in the University. This approval will be hierarchy based and password protected. Mobile Apps and Mobile Based Accessibility is also provided.
- Configuration system where all the rules and regulations can be configured by the university officials without any programming / customization.
- Do-it-yourself method to handle future customisation

Value Proposition

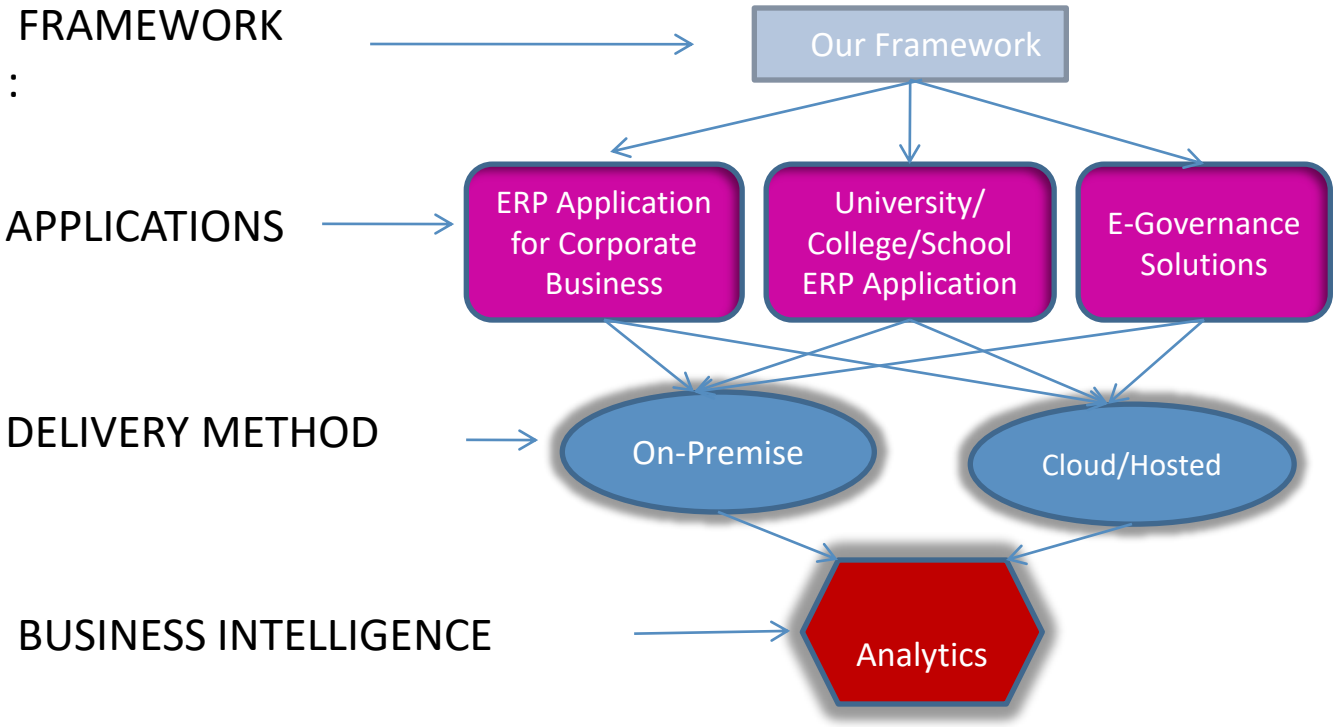
Product	Features	Benefits
100% Codeless & Web Based S/W	OS Independent	▪ Works on any computer just having any browser. Zero cost ▪ No Client Installations reducing Implementation duration & easy support
Product & Implementation Strategy	Do-It-Yourself	▪ Self Customizable. Can set own Leave, Payheads, Increment rules etc. ▪ Cost Cutting due to in-house staff involved for configuration
Documentation & Standardization	BPR is done & best with local practices implemented	▪ Ease in deriving MIS helpful during inspection ▪ Streamlines & Systematize the process and makes people independent
Product Management	Platform with 6 Sigma method adoption	▪Easy & very fast Customization using our drag and drop technology ▪All rules can be configured country wise avoiding major customisation

Comparison

Sr. no	Comparatives	Our Software	Other Software/Products
1	It is a platform with rule engine and workflow process which is very configurable to work across countries	Yes. Technically no specialised expertise is required as it is xml based and with drag and drop facility. Rich with repository of meta-data and to work basic skills of programming with SQL query is required	They have platform but you need technical expert to work on the same. Presently there are no of external BPMS which are integrated by partners to achieve best benefit
2	Can the same platform be used for both, on-premise where solution is ready while for SaaS where on-the- fly the processes can be changed	Yes	Either the solutions are available on cloud or on onpremise
3	Capablity of updating the core business logic repository with every partner updations and additions. This benefits the customers since any new requirement can be someone be part of the repository and min. level of customisation will be required	Yes	No
4	Ready Business Rules(conditional rule , stored procedures selection from the common repository and capability to add centrally which can add to the knowledge base) available.	Yes	Even if available, one has to be tech savy to use these features
5	Browser based Platform which creates applications/ solution on fly	yes	No

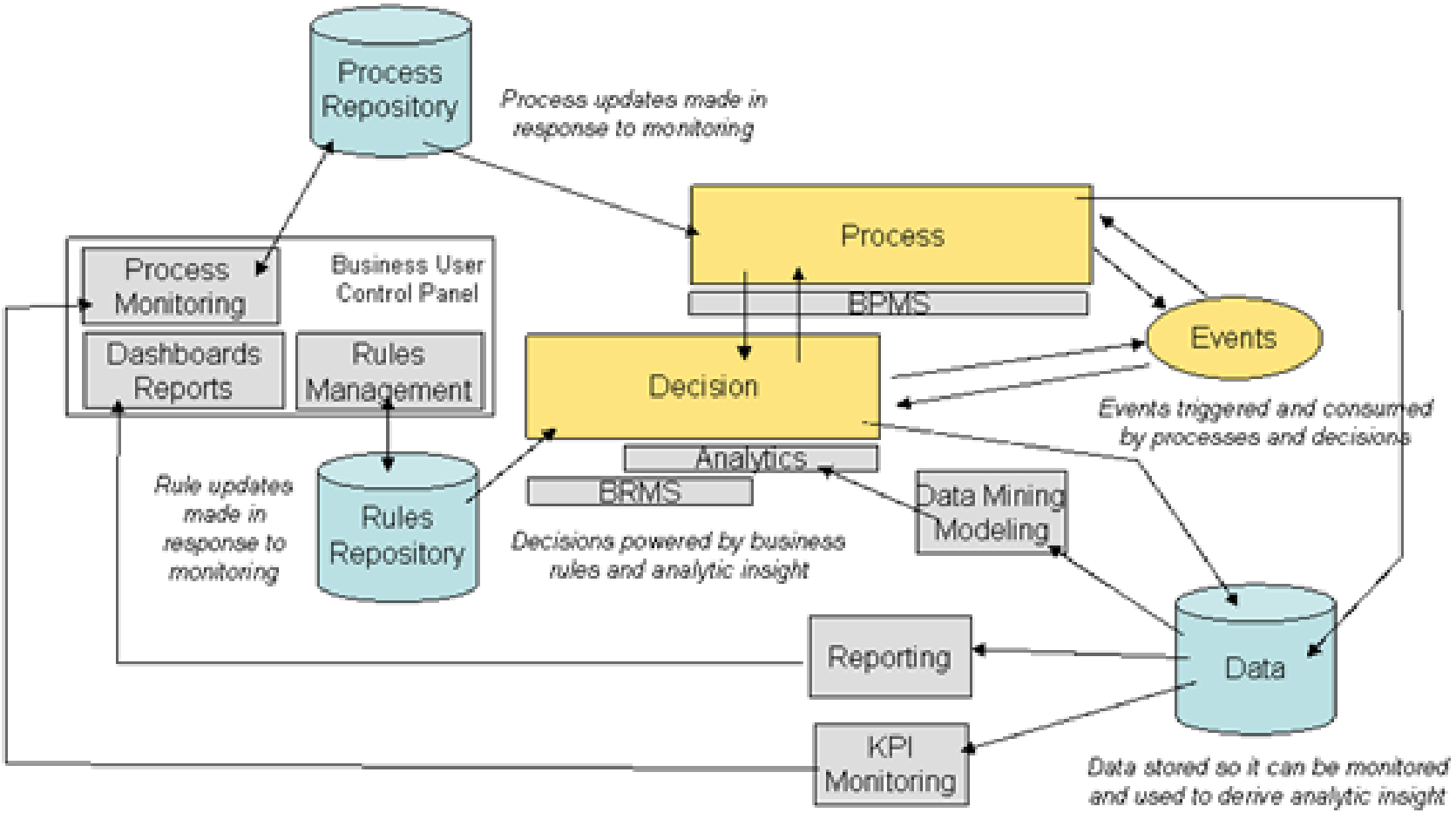
Sr. no	Comparatives	Our Software	Other Software/Products
6	Creating solutions by functional consultants, business analysts i.e only domain rich people and not purely technical people	Department people without the help of IT team can also set the rules. Ease of use	One has to be tech savvy for handling any such platform
7	Proprietary Technology	The framework is built using Microsoft technology but has the output is in xml	Many
8	Drag & Drop Feature for Creating Processes/ documents/ Menu painting	Yes	Not many have this feature
9	Defining State transition/workflow (approval, rejection, escalation, on-hold, Forwarding etc.) stages to business process	Easily configurable structure	All features of workflow are not available
10	Approval system using passwords or Digital signatures	Yes	Not all have the feature of approvals via digital signature
11	Query builder for defining rule consisting calculations, logical operators, conditions and also facilitate users to write queries like PL/SQL	Yes as the query builder has tools to write the queries easily	Easy UI not available
12	Delivery Model	Hybrid- License/Rental/SaaS(private-public)/Hosted	Rental not available

Snapshot

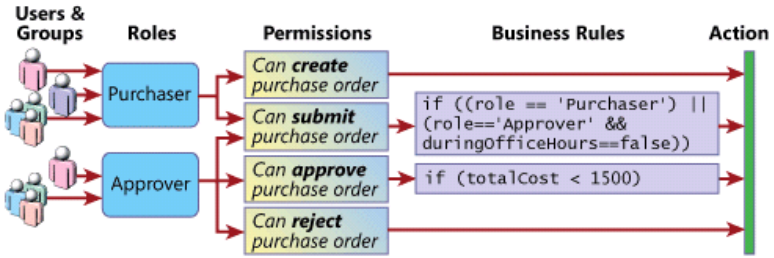

FRAMEWORK
:
Our Framework
APPLICATIONS
ERP Application for Corporate Business
University/ College/School ERP Application
E-Governance Solutions
DELIVERY METHOD
On-Premise
Cloud/Hosted
BUSINESS INTELLIGENCE
Analytics

Supports all Cloud Platforms & Technologies

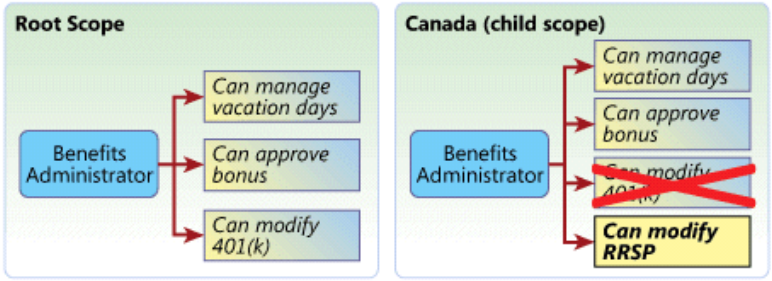
Benefits- Ease in configuring Payroll rules



Enables-Access Management & Approval Workflow Automation



Roles are managed within the SaaS application itself; they can contain individual user accounts, as well as user groups. Individual user accounts and groups can be assigned several different roles as required.



As a best practice, the application includes a default set of roles, permissions, and business rules that are available to all tenants, and it should allow individual tenants to customize these rules and create more rules through a useful and intuitive user interface.

Solution Architecture

The application is built on the below Layers, making it Non Monolithic, scalable and first of its kinds…

- User Interface:-
  This layer contains the user presentations related logic and all the GUI pages which are rendering on browser

- Orchestrator:-
  It basically decides the business services that have to be provided to the presentation Layer based on the user event, which could either be Wcfservice, or DLL Service based on xml configuration.

- Service:-
  Service may DLL o WCF. This Layer provides all the business Services to the system e.g. different type of payments mode for purchase Cheque, Credit card Tax Calculation related logic or salary break up logic etc.

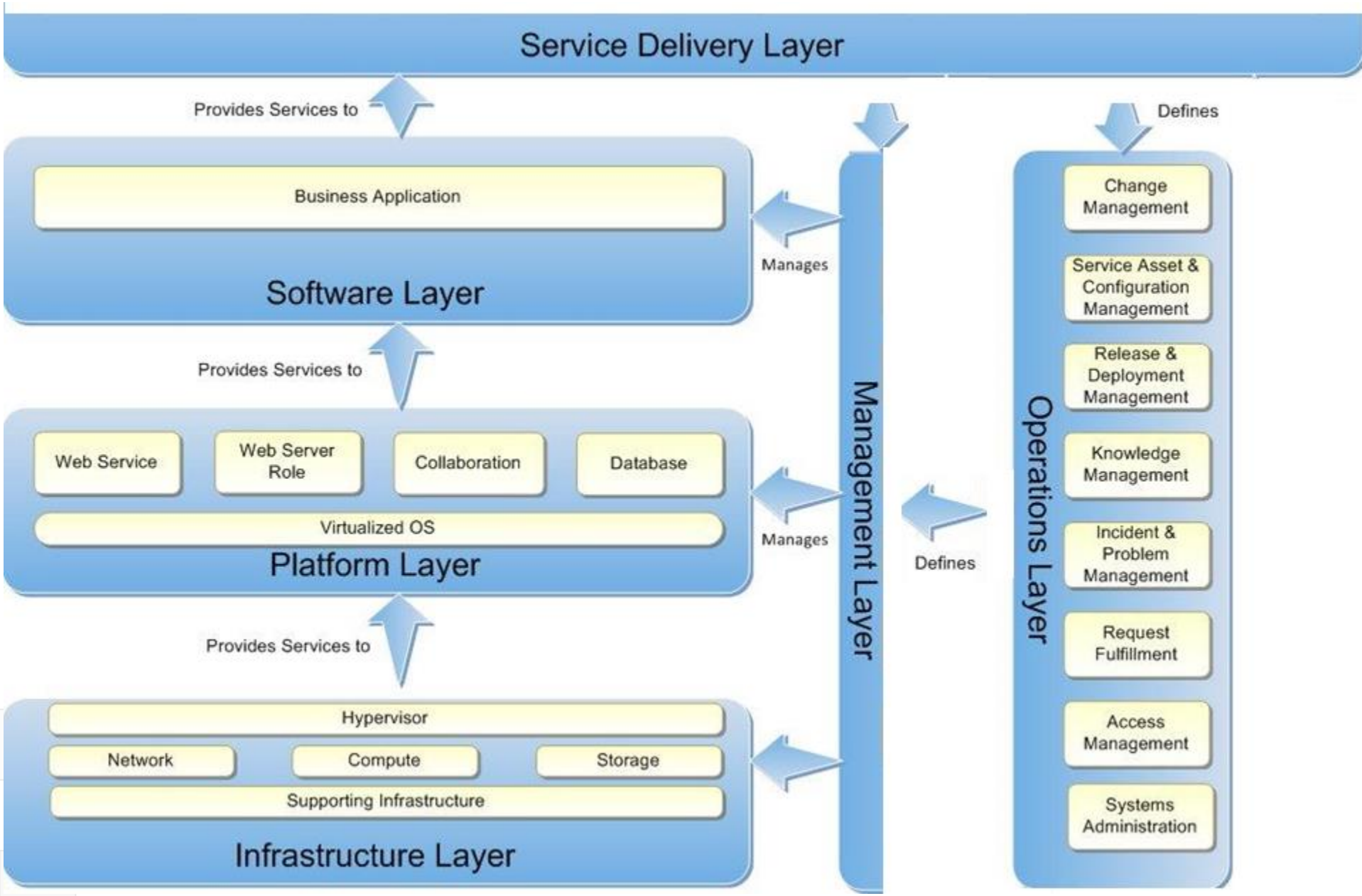
- Persistence Orchestrator:- The Persistence Orchestrator decides which database the System will connect to based on the xml Configuration. We can store database n MYSQL, SQL, Oracle DB 2 etc.

- Persistence Engine:- The data Execution logic for the business service will be provided in this layer (using Enterprise Library)

- Common:- It Contains the Common Function that can be used anywhere in any Layer e.g. Encryption, Decryption and making general Function for the filing Drop down etc.

- Utility:-
  This Layer contains the business object that will be used in the system.

Technical Architecture Diagram



Features of Integrated University Management System

Academic-Modules

- Admission Management System
- Maintain University
- College Registration
- Maintain Colleges
- Import/Export Utility
- Programs Creation
- Courses/ Subjects Creation
- Online Admission
- Student Registration Process

- Fee Management
- Online Payment
- Students Eligibility Process
- Students information System
- Admission Cancelation & Transfer
- Student Profile (Mailing list and SMS list)
- Re-registration
- Enrollment and roll number generation
- Special Configurable Treatment for Reserve class students
- Configurable Enrollment Generation
- Student / Faculty timetable creation

- Scholarship, concession to the students
- Student attendance
- Academic calendar
- Faculty course allocation
- Time Table Creation
- Mark Extra Lecture Attendance
- Condone and defaulter Management
- Mark Attendance for replaced or swapped lectures
- Bonafide and relieving certificate creation
- Statistical Report Generation

- Examination Management System
- Examination Rules and configuration
- Roll number/Hall ticket no allocation for examination
- Exam Schedule
- Examination center allocation
- Exam Hall/Calls Room definition
- Seating arrangement
- External examiners management
- Invigilation
- Question paper upload
- Internal marks feeding online
- Faculty assessment feeding
- Examination attendance
- Centralized Assessment process
- Moderation rules configuration and marks entry

- Answer sheet encoding
- Final marks feeding
- Result generation and notification
- Rank list preparation
- Re-evaluation/Revaluation results
- Grade card generation
- Transcript sheet generation
- Degree generation
- Certificates printing
- Result Announcement System
- Assignment & Submission
- Examination Result declaration through online portal/SMS
- Results of College Exam, verification

- Hostel & Guest House Management
- Important Notifications
- Self Service Portal
- Student Portal
- Parent Portal
- Staff Registration

Non-Academic-Modules

- Human Resource Management
- Personal Information Management System/Employee Information
- Employee Confirmation/Increment/Transfer
- Employee Service Book
- Employee Attendance Management
- Leave Management/Leave Encashment
- Claims & Reimbursement
- Pension/PF/Gratuity
- Declaration with Payroll Processing/Salary Slip
- Arrear & Bonus

- Travel & Tour Management
- Payroll and Salary Slip
- Appraisal Management
- Training Management

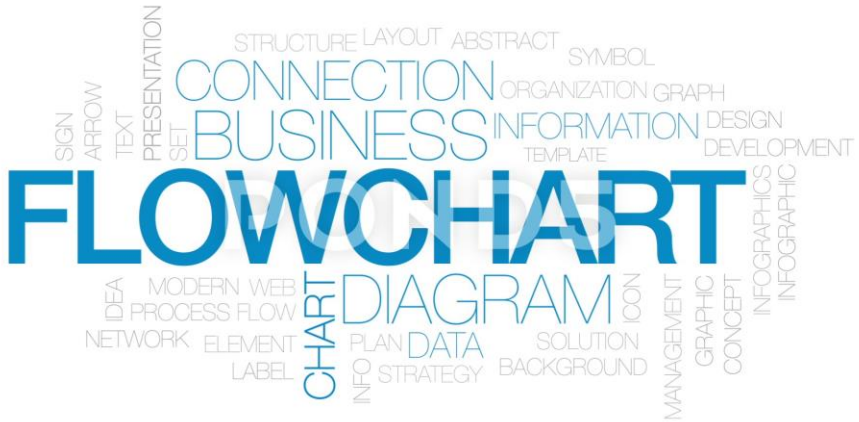
- Purchase and Stores Management
- Purchase Requisition
- Supplier Pricing and Quotation
- RFQ Generation/Compare quotes
- Purchase Order
- Goods Inward/GRN
- Quality Control
- Stock Update & Ledgers
- Inventory with Barcode
- Stock Count & Available Stock Checks
- Stock Transfers
- MIS Reports

- Finance & Accounts Management
- Accounts Group/Chart of Accounts/Opening Balance
- Receipt and Payment
- Funds & Grants Management
- Cost/Center/Annual Budgeting/ Tax Structures
- Generate receipts on Settlement Bills
- Raise Debit/ Credit Notes
- Inter P&A transfer
- Track Payables/Income & Expenditure Reports
- Balance sheet/Account Statements
- Project/Scheme wise Revenue Expenditure
- Detailed Grants Utilization

- File Tracking Management
- Document Management
- Placement Management
- Internship Management

Online Screen Marking/e-Assessment

Process flow

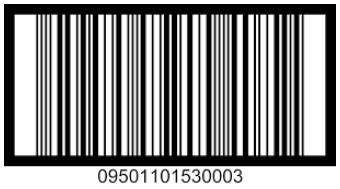


Conducts Exam

Student Writes Exam

Answer scripts are Collected

Scanned in university premise



Barcodes are affixed on each Answer script

Answer Scripts are scanned and saved as PDF

PDF files are sent to Central Server

Application imports the Answer Scripts

Invalid Answer scripts are rejected

- ✓ Page Count Validation
- ✓ Student Attendance Validation
- ✓ Data Consistency Validation

List of Rejected Answer scripts sent for rescan

Next

Valid Answer Scripts are received at Central Server and distributed to different Evaluation centers

- ✓ Complete Flexibility to send Scripts
- ✓ Foolproof mechanism for file transfer
- ✓ File transfer possible over different protocols

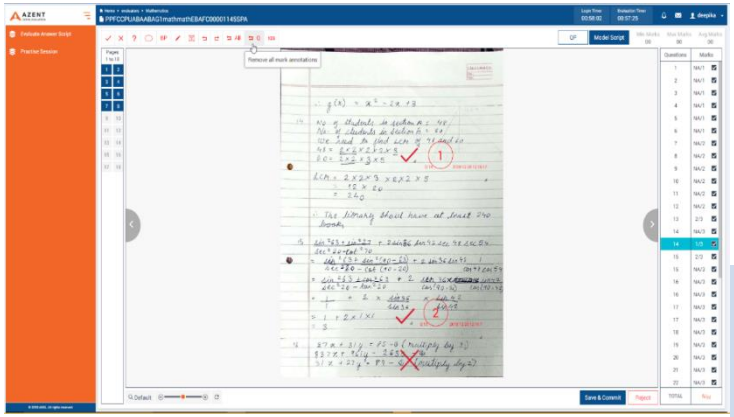
Answer scripts are received and stored on local server

Task Completed

Final checked Answer script PDFs generated and Submitted to University

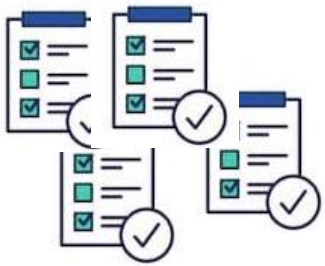
	A	B	C	D
	Student Name	Course	Marks	Grade
	Bob	Science	60	A
	Emily	Science	70	B
	John	Science	50	C
	Alice	Math	50	C
	Bob	Math	80	A
	John	Math	60	B
	Alice	Arts	50	C
	Alice	Arts	70	B
	Bob	Arts	60	B

Marks Data collated

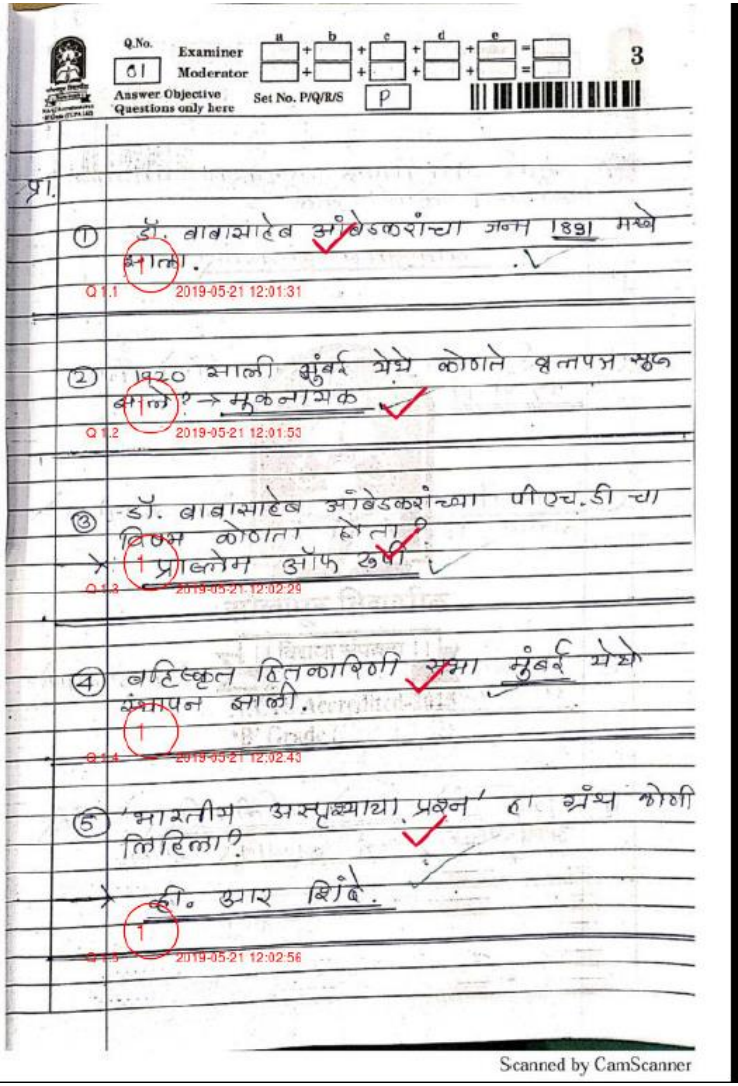


Evaluators check answer scripts and provide marks

- ✓ Friendly User Interface
- ✓ Intuitive Menus
- ✓ Can see Question Paper at a click
- ✓ Can see model Answer at a click
- ✓ Question-wise Marks Summary at end
- ✓ Compulsory to visit every page
- ✓ Minimum time limit on checking



The checked Answer Scripts are pulled from Evaluation center



Q.No. 01 Examiner Moderator
Answer Objective Questions only here
Set No. P/Q/R/S P
3

प्र.

① डॉ. बाबासाहेब आंबेडकरांचा जन्म 1891 मध्ये झाला. ✓
Q 1.1 2019-05-21 12:01:31

② 1920 साली मुंबई येथे कोणते वृत्तपत्र सुरू झाले? → मूकनायक ✓
Q 1.2 2019-05-21 12:01:53

③ डॉ. बाबासाहेब आंबेडकरांच्या पीएच.डी. चा विषय कोणता होता?
→ प्रॉब्लेम ऑफ रुपी ✓
Q 1.3 2019-05-21 12:02:29

④ बहिष्कृत हितकारिणी सभा मुंबई येथे स्थापन झाली. ✓
Q 1.4 2019-05-21 12:02:43

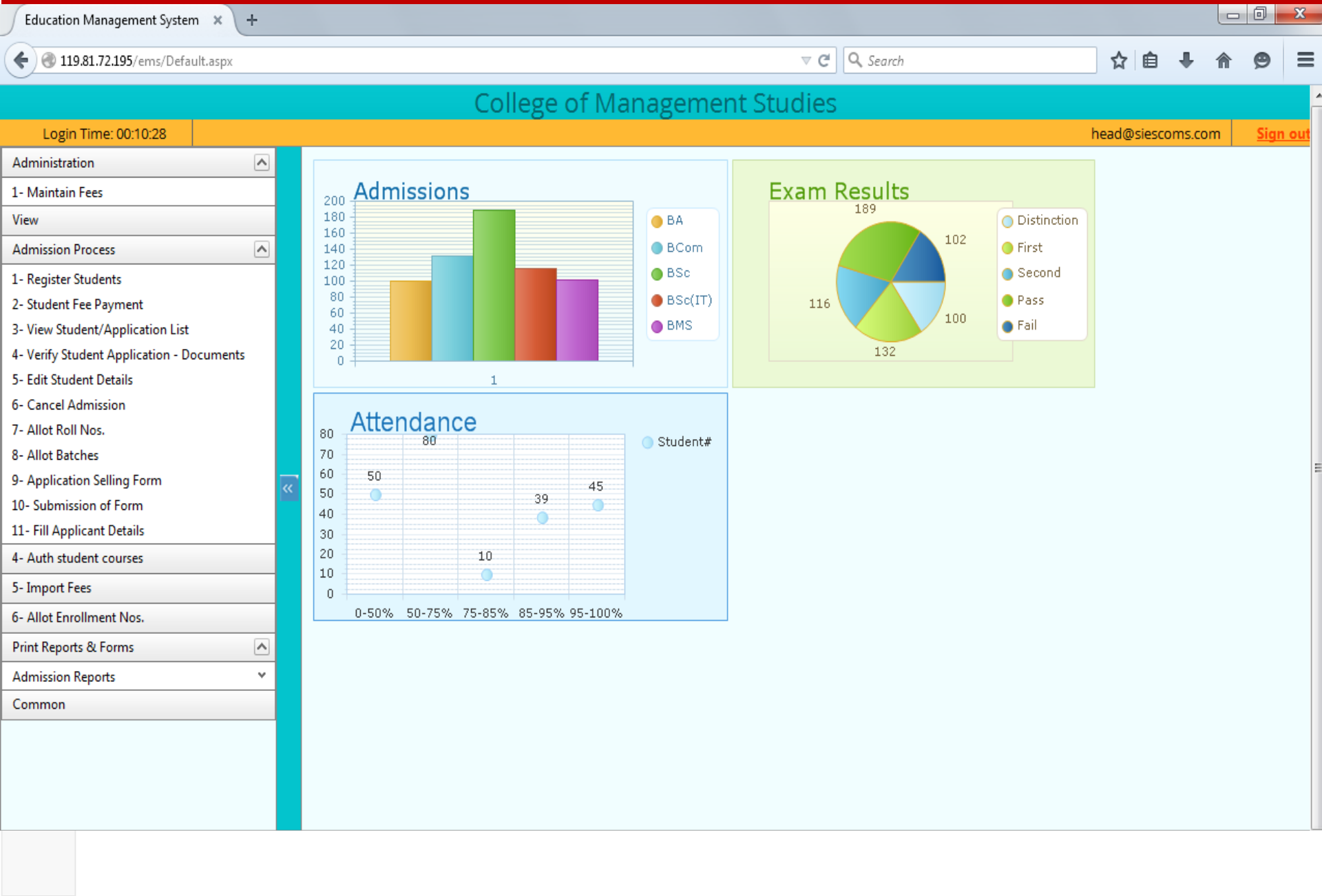
⑤ 'भारतीय अस्पृश्यांचा प्रश्न' हा ग्रंथ कोणी लिहिला? ✓
→ व्ही. आर. शिंदे. ✓
Q 1.5 2019-05-21 12:02:56

Scanned by CamScanner

Benefits

- Improves efficiency in the evaluation system and helps declare results on time
- Standardizes the quality of evaluation and roots out subjectivity
- Critical features such as double evaluation and moderation
- Very advanced features such as seeding will help in improving evaluator quality
- Helps the university to take key decisions from analytics and reports

Login


Education Management System
119.81.72.195/ems/Default.aspx
Search
College of Management Studies
Login Time: 00:10:28
head@siescoms.com
Sign out
Administration
1- Maintain Fees
View
Admission Process
1- Register Students
2- Student Fee Payment
3- View Student/Application List
4- Verify Student Application - Documents
5- Edit Student Details
6- Cancel Admission
7- Allot Roll Nos.
8- Allot Batches
9- Application Selling Form
10- Submission of Form
11- Fill Applicant Details
4- Auth student courses
5- Import Fees
6- Allot Enrollment Nos.
Print Reports & Forms
Admission Reports
Common
Admissions
200
180
160
140
120
100
80
60
40
20
0
1
BA
BCom
BSc
BSc(IT)
BMS
Exam Results
189
102
116
100
132
Distinction
First
Second
Pass
Fail
Attendance
80
70
60
50
40
30
20
10
0
50
80
10
39
45
0-50%
50-75%
75-85%
85-95%
95-100%
Student#

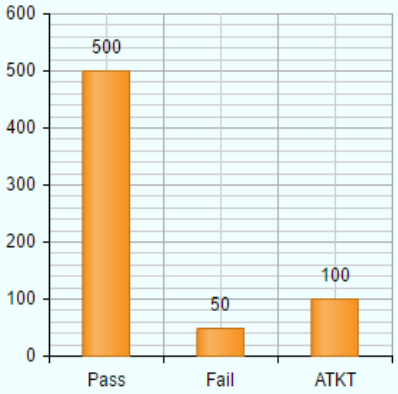
College Dashboard

Education Management System

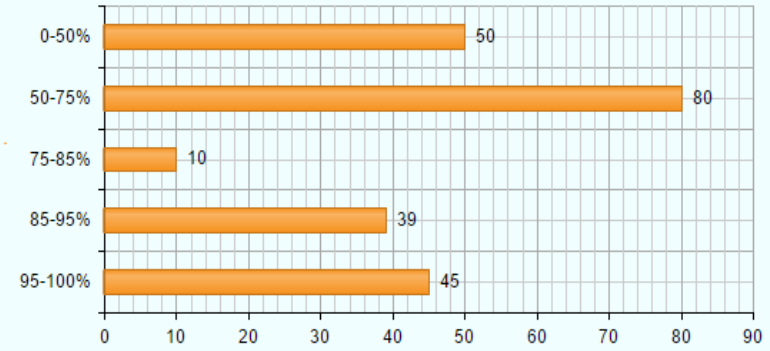
Sign

Login Time: 01:01:29 | Bihar Veterinary College, Patna | bvc@g.com-B

Student Result Analysis



Student Attendance Count

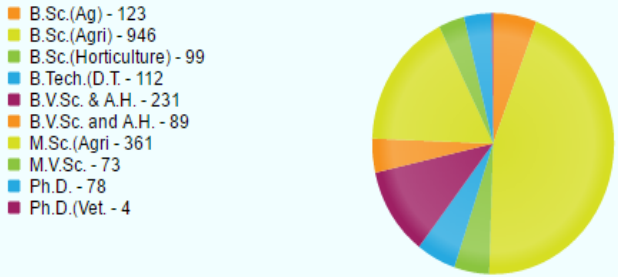


Notifications

2nd Semester results to be declared soon

Conference on Modern Agriculture Methods on 15/03/2016

Program Wise Student Count



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Student Dashboard

Education Management System

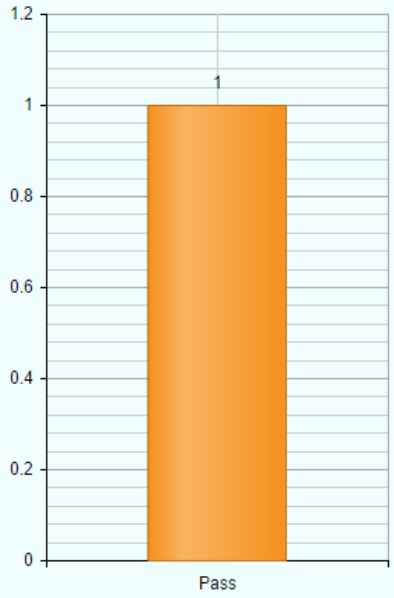
Sign out

Login Time: 00:57:50
68/2014-15

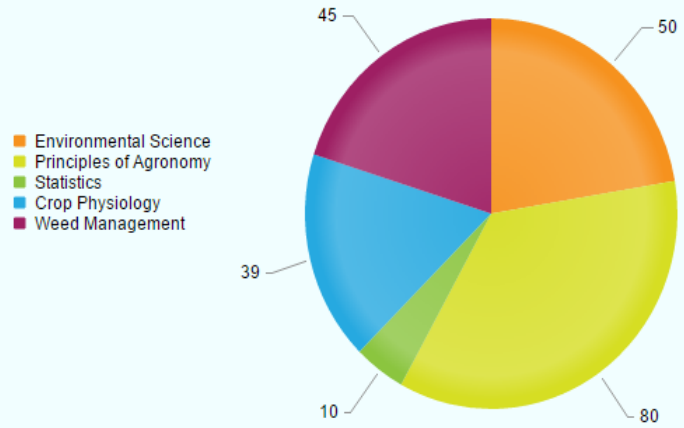
Bihar Veterinary College, Patna

mkb9660@gmail.com-Brijnandan Kumar

Result Analysis



Course wise Attendance Percentage



Notifications

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Conference on Modern Agriculture Methods

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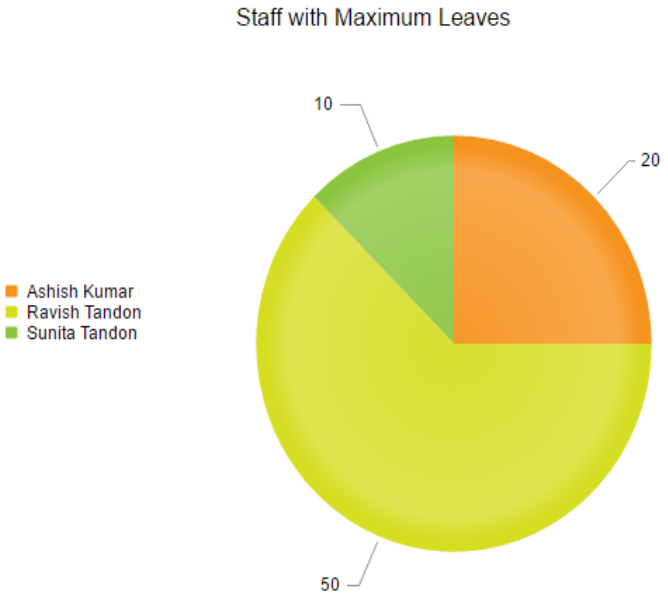
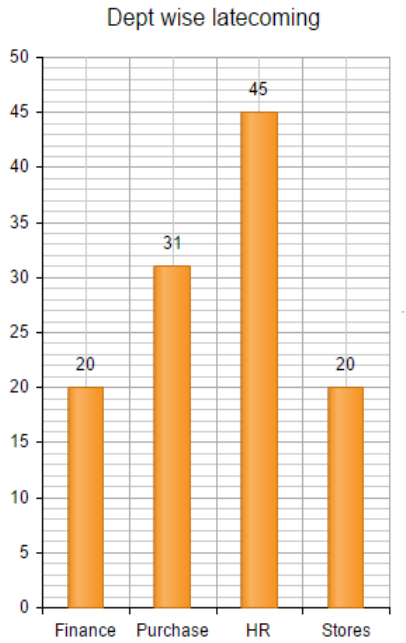
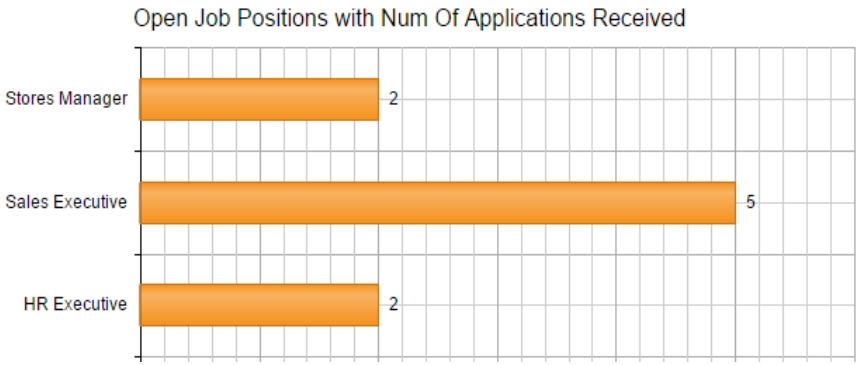
HRMS Dashboard

Login Time: 01:03:39 admin monginis

Sign out







Student Performance Dashboard

Education Management System

Sign out

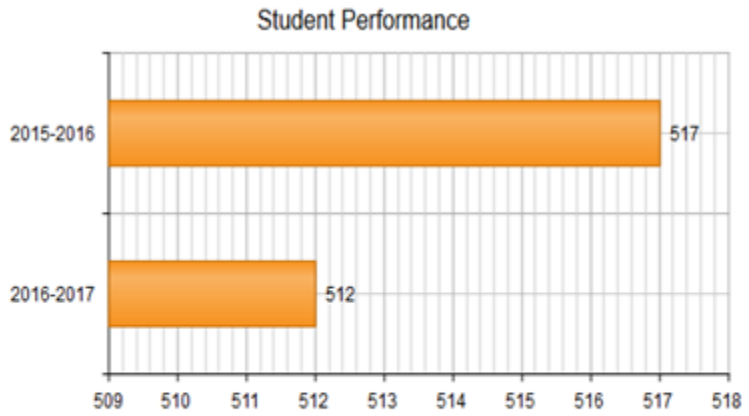
Login Time: 10:19:08 | Bihar Veterinary College, Patna | bvc@g.com-Bvc

Student Performance

College* Nalanda College of Horticulture, Noorsarai | Academic Year* 2015-16 | Program* All items checked

Student Alpana Kumari | Course 2 items checked | Search

Student	Course	2015-2016	2016-2017
Alpana Kumari	AAE-102(Introductory Economics)	249/360	243/360
Alpana Kumari	AHF-101(Principles of Landscape Gardening)	268/360	269/360

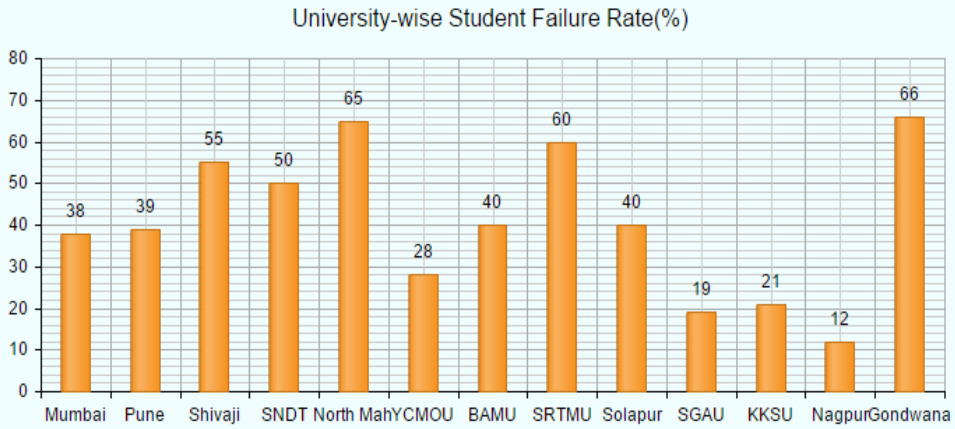


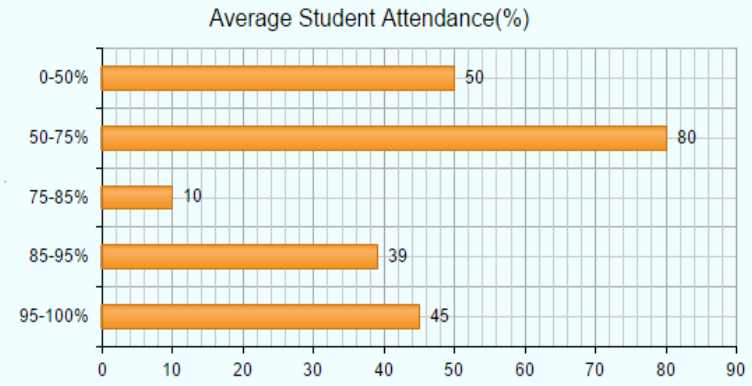
University Performance Dashboard

Education Management System

Sign out

Login Time: 17:37:16 | Bihar Veterinary College, Patna | bvc@g.com-Bvc





Notifications

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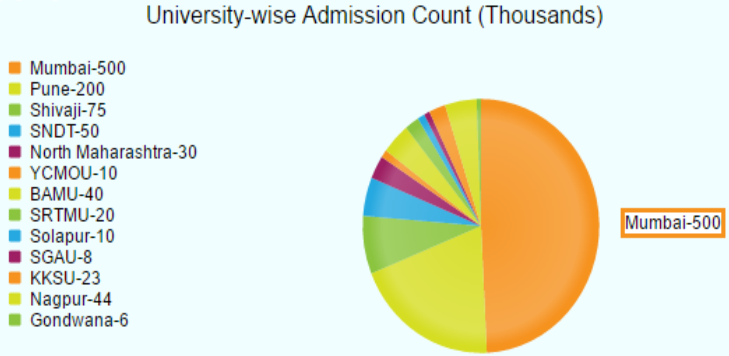
Conference on Modern Agriculture Methods on 15/03/2016



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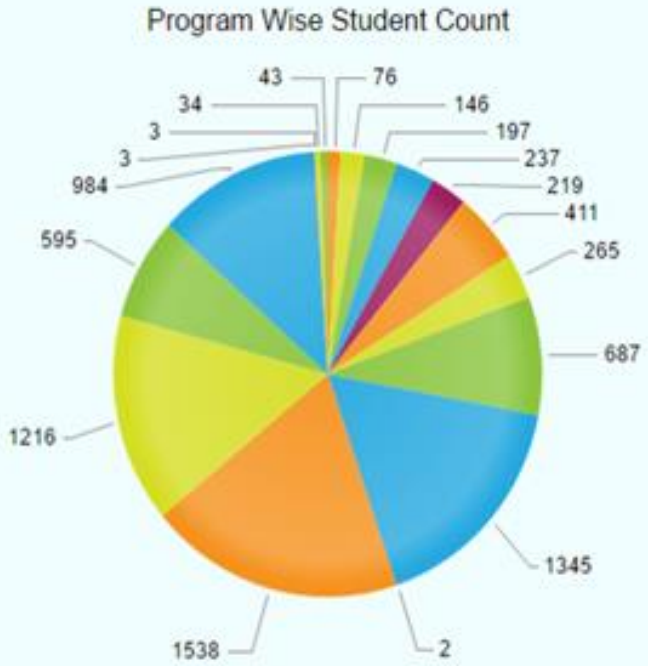
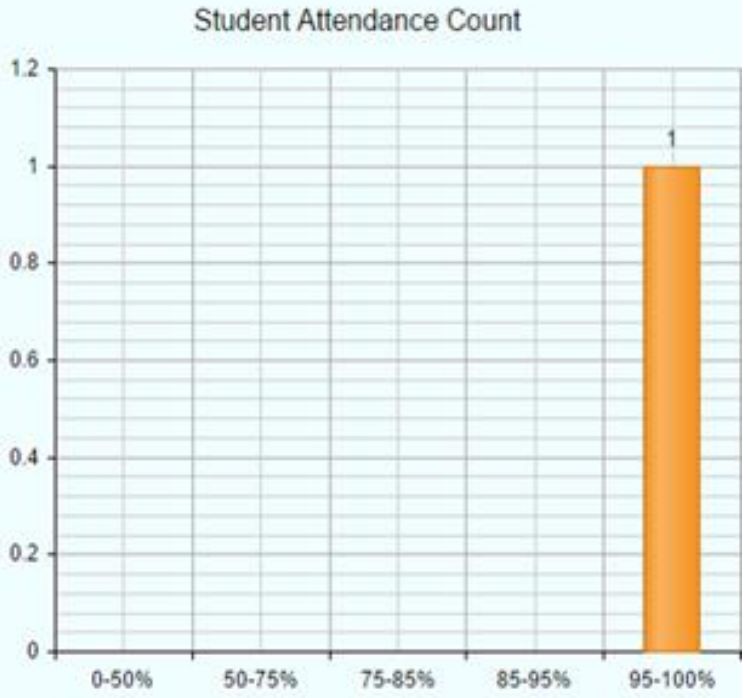
College wise Program Student Count & Attendance

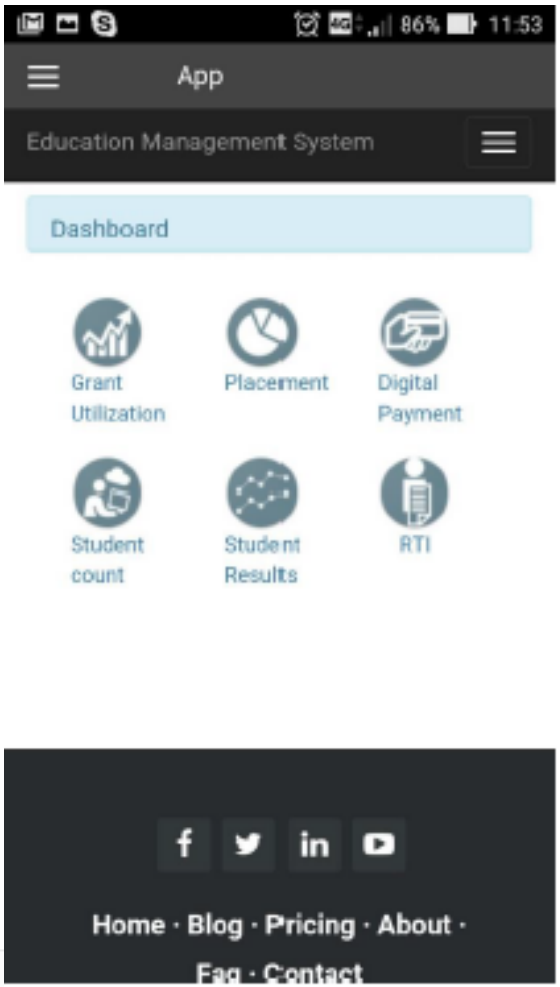
College: Dr. D. Y. P. Pratishan's, Pad. Y.B Patil Polytechnic | Show Dashboard



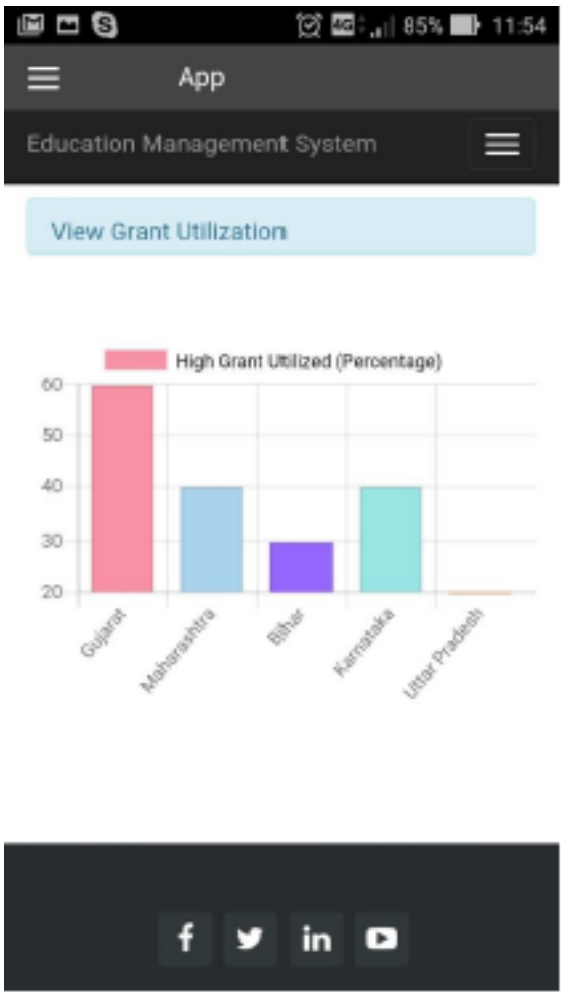


Notifications

Mobi

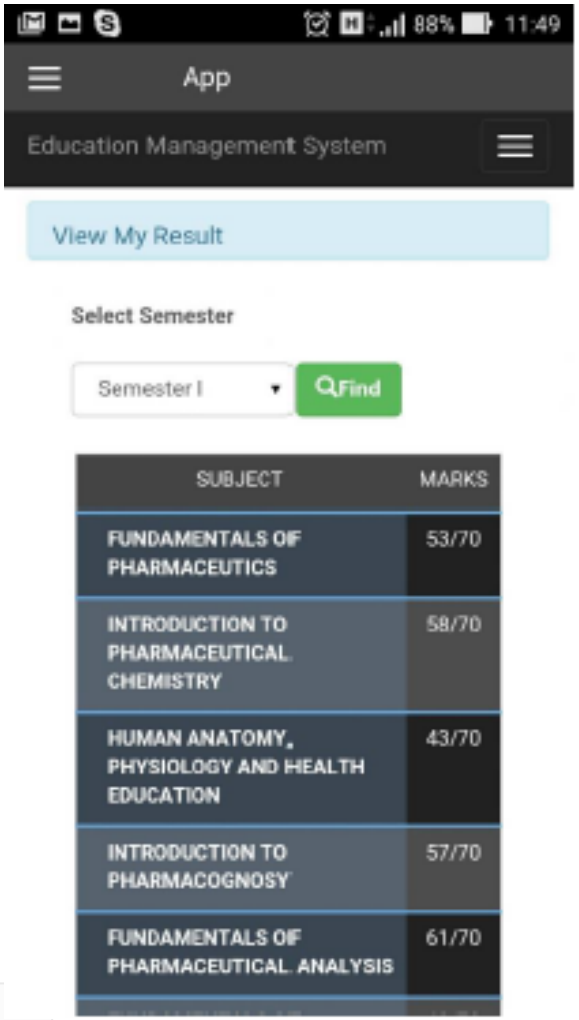


Dashboard-Menu

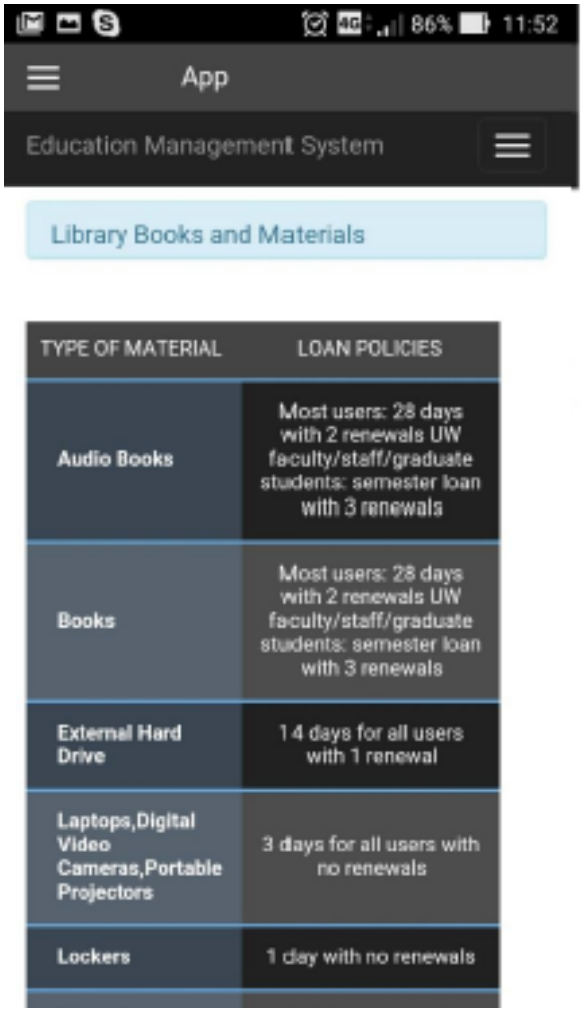


Grant Utilisation

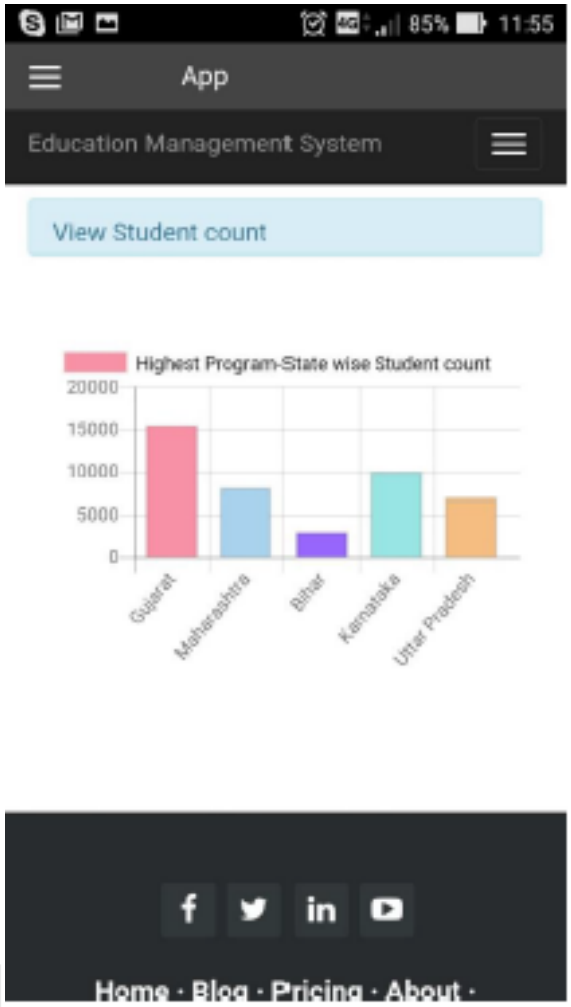
Payment status Across Campuses



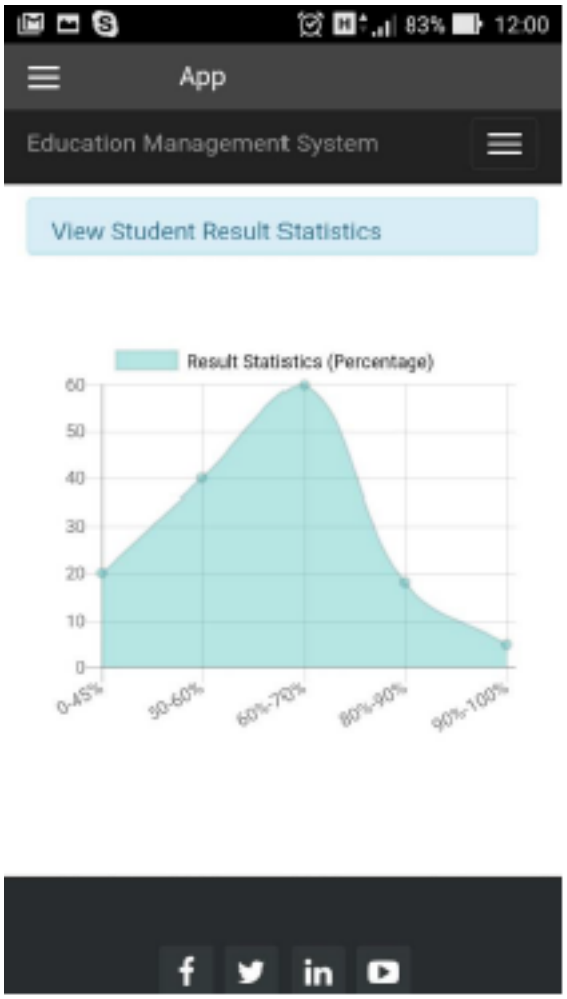
My Result



View Library

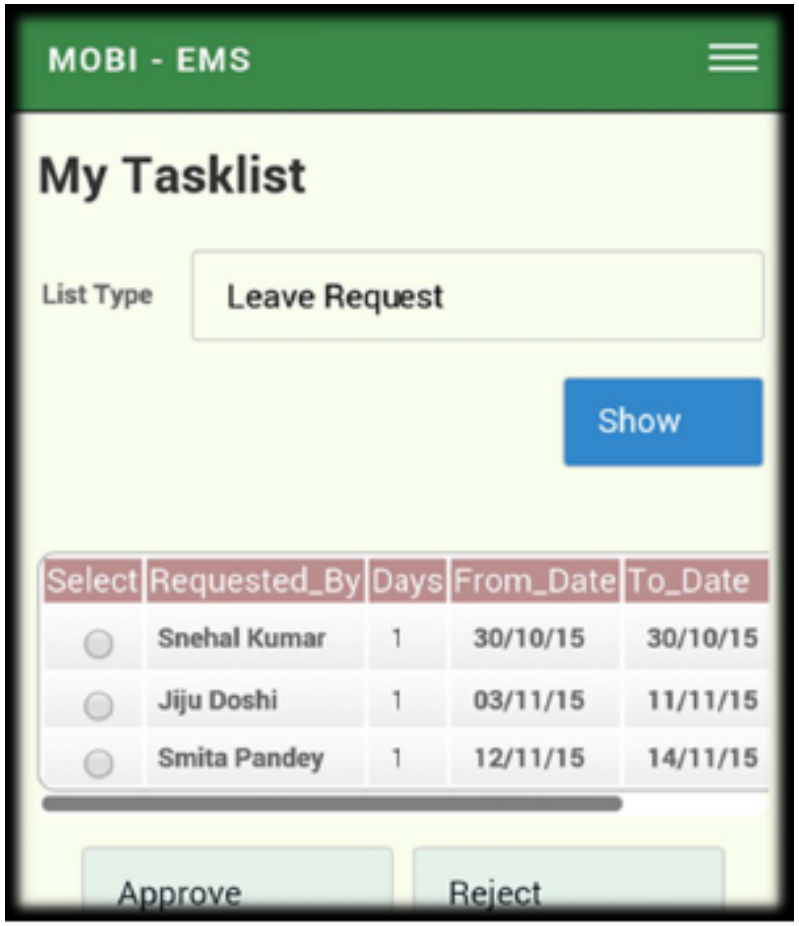


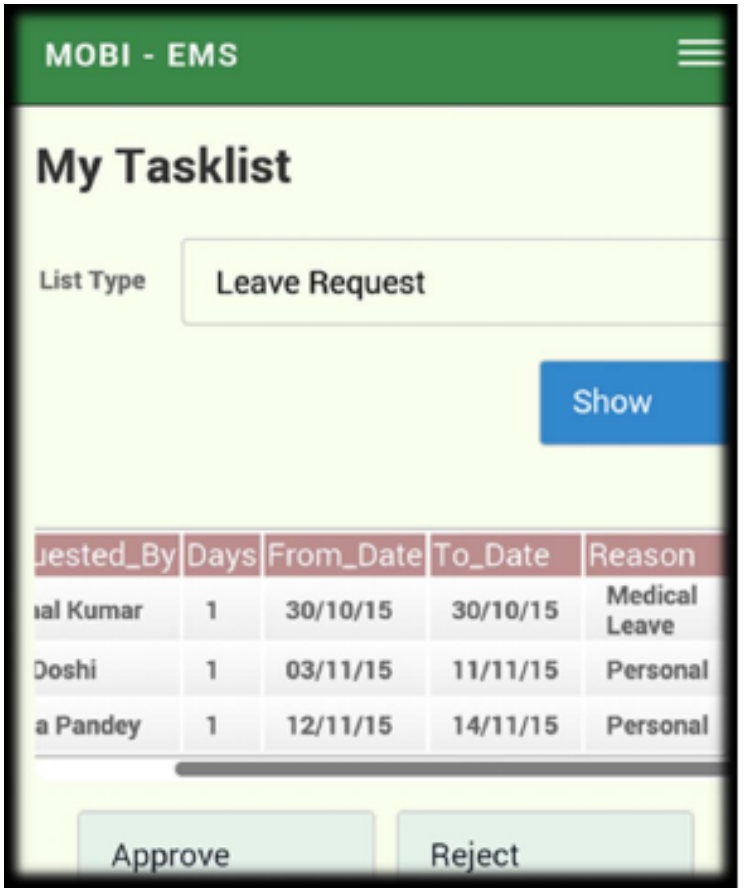
Student Count Across Campuses



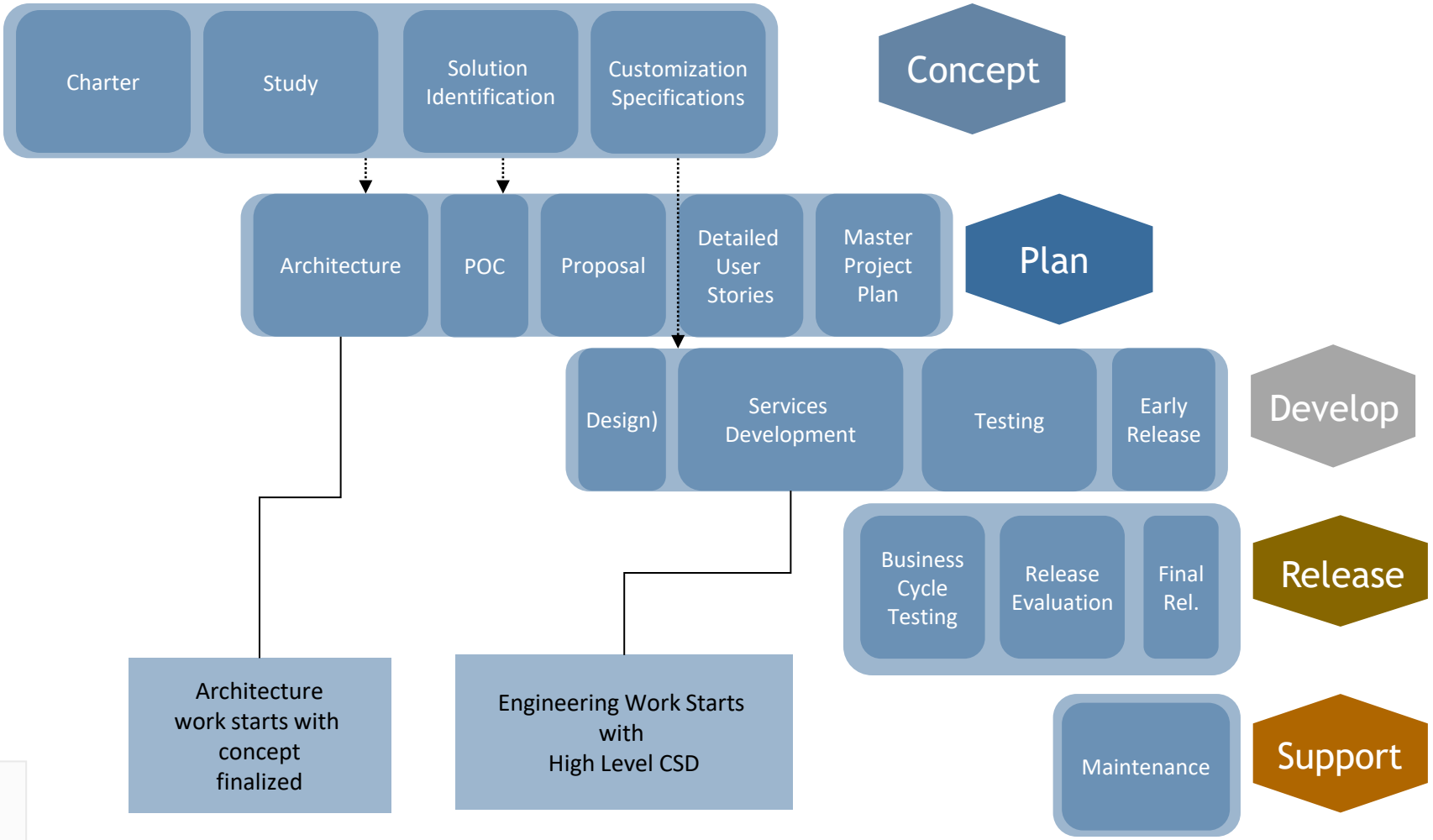
Result Analysis Across Campuses

Mobile App


MOBI - EMS
My Tasklist
List Type
Leave Request
Show
Select
Requested_By
Days
From_Date
To_Date
Snehal Kumar
1
30/10/15
30/10/15
Jiju Doshi
1
03/11/15
11/11/15
Smita Pandey
1
12/11/15
14/11/15
Approve
Reject


MOBI - EMS
My Tasklist
List Type
Leave Request
Show
ıal Kumar
1
30/10/15
30/10/15
Medical Leave
Doshi
1
03/11/15
11/11/15
Personal
a Pandey
1
12/11/15
14/11/15
Personal
Approve
Reject

Project Management Methodology – Development Projects



Project Management Methodology – Product Implementation

Project Initiation and Planning

- Scope Definition
- HW.SW and Services Procurement
- Project Planning
  - Schedule development
  - Communication Planning
  - Risk management
- Team Formation
  - Steering Committee
  - Project Team
  - Client Core Team (Champion Users)
  - Change Control Board

Requirement Gathering and Gap Analysis

- Infrastructure setup
- Product Demonstration
- Requirement Gathering
- Gap Analysis
- Prototype Demonstration
- Business process reengineering
- Updated workflows
- Requirement Signoff

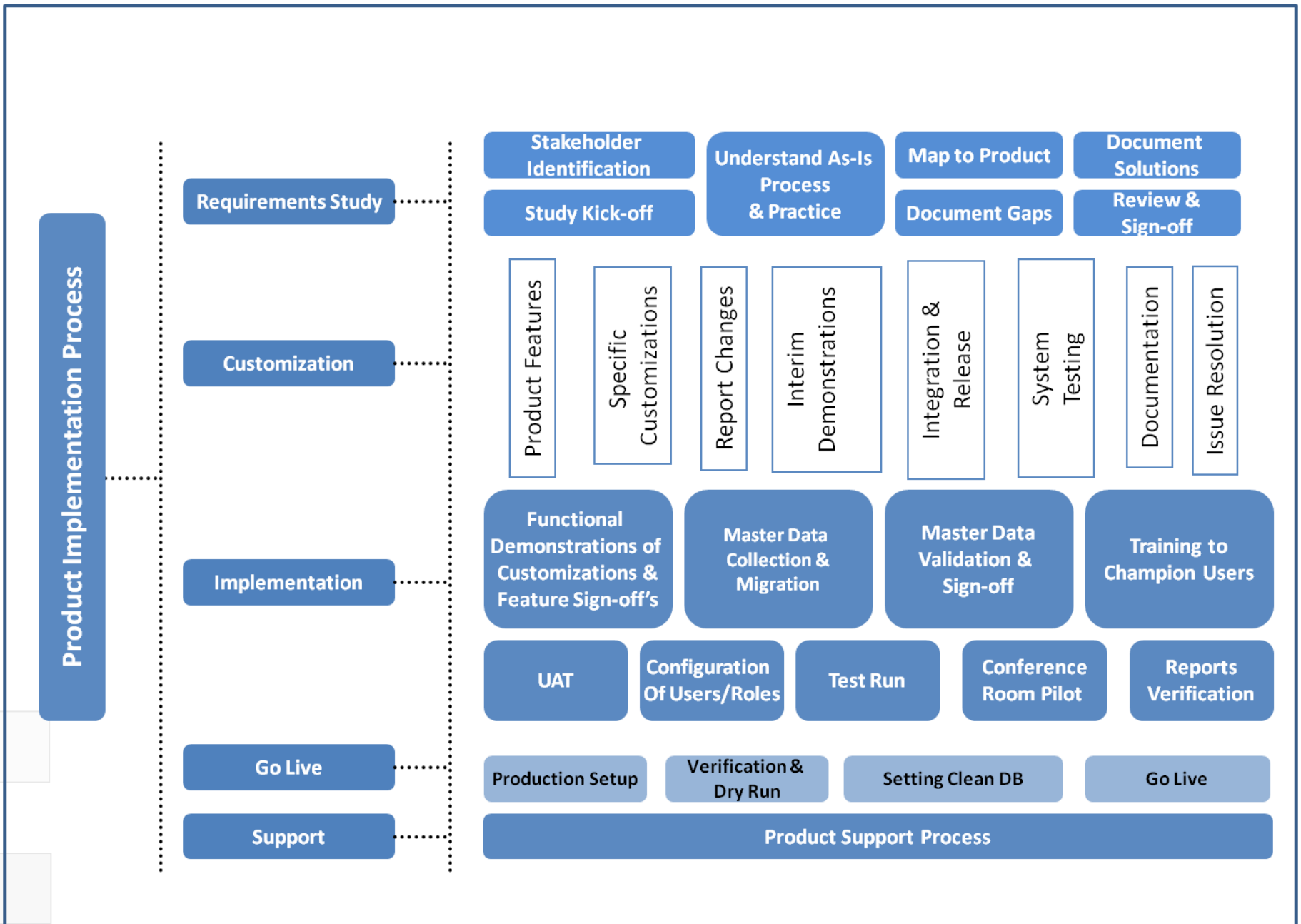
Product Customization

- Design Consideration
  - Using Agilewiz™
  - Maximum Reusability
  - Seamless Integration
  - User friendly GUI
- Configuration and Custom Development
- Testing
  - Functionality testing
  - Performance testing,
  - Security testing
  - Usability testing
  - System integration testing
  - Business scenario testing
- Prototype Demo

UAT

- UAT Planning
- Infra and Apps Security Testing and Sign off
- UAT Scenario Documentation
- Product Demo for UAT
- Champion User Training
- Pilot Run
- Product Acceptance testing and signoff

Risk free transition & steady state framework, backed by lessons learned


Product Implementation Process
Requirements Study
Customization
Implementation
Go Live
Support
Stakeholder Identification
Study Kick-off
Understand As-Is Process & Practice
Map to Product
Document Gaps
Document Solutions
Review & Sign-off
Product Features
Specific Customizations
Report Changes
Interim Demonstrations
Integration & Release
System Testing
Documentation
Issue Resolution
Functional Demonstrations of Customizations & Feature Sign-off's
Master Data Collection & Migration
Master Data Validation & Sign-off
Training to Champion Users
UAT
Configuration Of Users/Roles
Test Run
Conference Room Pilot
Reports Verification
Production Setup
Verification & Dry Run
Setting Clean DB
Go Live
Product Support Process

Quality Control Procedures

We Follow 6-Sigma Quality based 5 step implementation process
DEFINE
MEASURE
ANALYSE
IMPROVE
CONTROL

Activities included in the Implementation are as follows and all above quality parameters are followed at each stage:

1. Requirement Development
Freezing of the complete Requirements through onsite visits will be a part of this activity.

2. Customization
During this phase the customization of Forms & Reports with Unit Testing will be done offsite.

3. Configuration
Model Simulation with Integration Testing will be a part of this activity which will be done offsite.

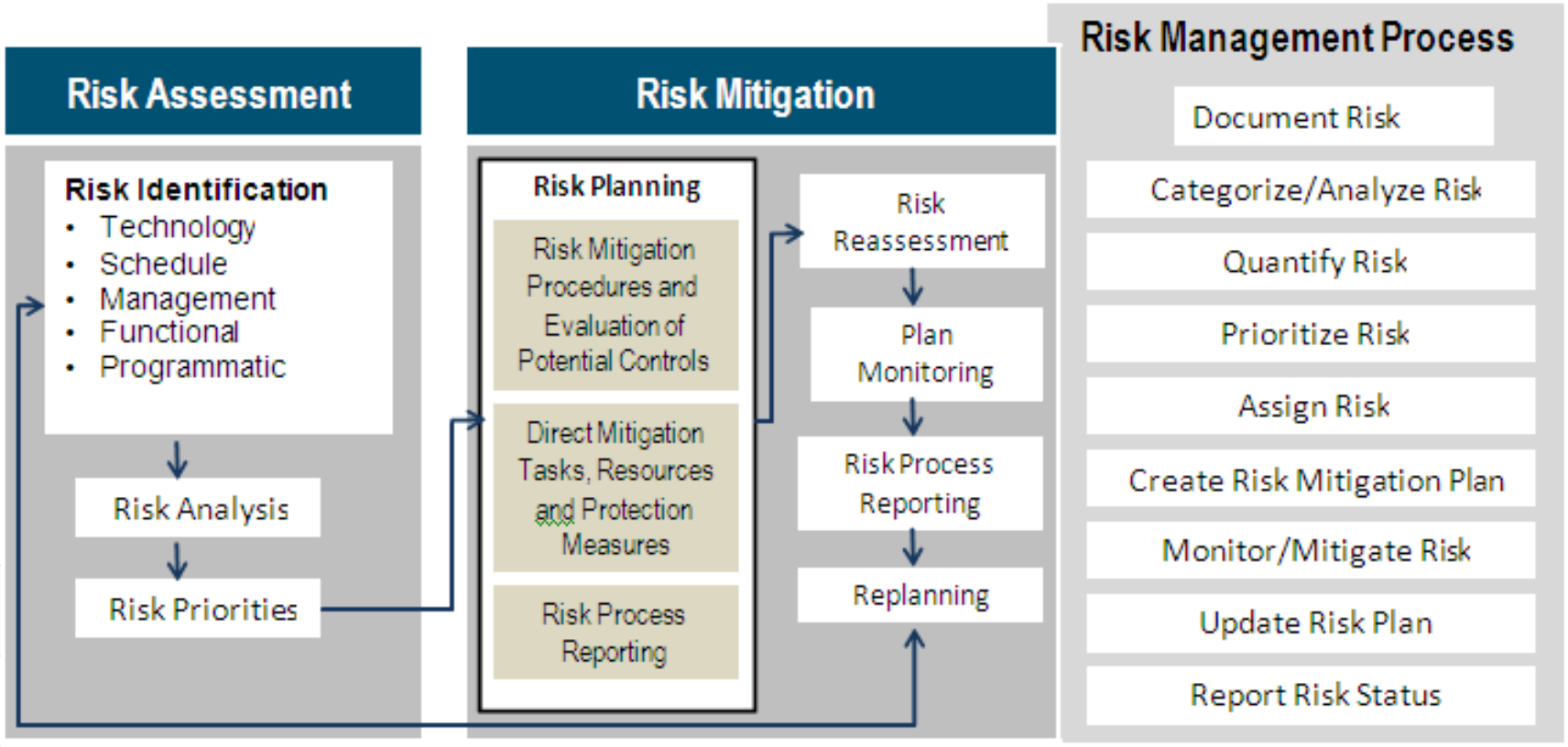
4. Training
‘Train the Trainer Approach will be followed. Onsite Workshop to Train the Trainers.

Key Activities carried our during implementation

		Month 1				Month 2				Month 3		
	Key Activities	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3
1	Project Planning & Scope Definition											
	Steering Committee Formation											
	Project Teaming											
	Client Core Team Availability-Champions											
	Change control Board											
1	Requirements Gathering											
	Requirement Gathering via Questionnaire											
	Identifying AS-IS Process											
	Product demonstration with prototyping											
	Verification											
2	Technical Solution											
	Business Process Overview											
	Business Process Re-engineering											
	Gap Fit Analysis											
	To-Be Process flow with Workflows											
	Functional Requirements Document											
	Requirement sign-off											
3	Project Execution											
	Resource Allotment											
	Preparation of Audit Sheets/Deliverables											
4	Execute Project											
	Customisation related to Gaps											
	Data Preparation											
	Business Process Configuration											
	Organisation Training											
	Level 1 Training											
	Develop Reports											
	Testing Plan and Scenarios											
	User Acceptance Testing											
5	Product Integration											
	Data Migration Strategy and Planning											
	Master Data Preparation											
	Test and Realize Data Migration											
	Volume and Stress Test											
	End User Training											
6	Parallel Run with GO-Live											
✦	GO LIVE											

Risk Management

- Our risk management processes are built into the process framework.
- At each stage, gating processes are in place to ensure that key risks have been identified and handled.
- We will focus on identifying the issues associated with implementing organizational change, identifying risks in the migration process, forming risk mitigation strategies, taking preventive measures, and developing contingency plans for rapid recovery.



Training

- During Project planning phase, we will identify training required for the personnel/team to use, manage, and maintain the application, including training to software support so that the personnel/team can assume project responsibility.
- Following are the various steps involved in the training process
  - Plan for Training Sessions - Jointly with Us and Client Staff
  - Identification of Training Groups - By computer world and Client Staff
  - Scheduling of each Training Session – By computer world
  - Preparation of Training Material – By computer world
  - Identification of Training Venues and infrastructure at Client - By Client
  - Setup of the software and related database - By computer world (This would assume that the necessary hardware / network / communications setup etc will be done by Client staff)
- Various Deliverables of training program
  - Classroom sessions
  - Hands on Training
  - Train the Users / Master Trainers
  - Knowledge Transfer