**Processes along with Six System Element Analysis**

The Six Elements Analysis gives a thorough explanation of each element's function in each process. The table below makes it very evident that human entities predominate all important system operations, particularly the two most important ones—mapping course outcomes and examining documents associated with them. The existing approach, for instance, relies significantly on manually handled and processed hardcopy databases. As a result, there is a considerable amount of waiting involved in the interdependent processes before the Human components may perform their obligations.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Process** | **System Roles** | | | | | |
| **Human** | **Non-Computing Hardware** | **Computing Hardware** | **Software** | **Database** | **Network and Communication** |
| **Student Registration** | **Student:**  **a) Search for the website**  **b) Goes to the website.**  **c) Clicks on the form option.**  **d) Fill up the form with required Information.**  **Registrar's Office:**  **a) Checks and verifies student enrollment information from the forms from**  **the website or hardcopy forms.**  **b) Registrar Office’s Admin**  **logs into the system using**  **Admin-ID and password.**  **c) Sends verified**  **student information as an**  **attachment to Admin/Team.**  **Admin:**  **a) Admin logs into**  **the system using**  **SPMS User-ID and**  **password.**  **b) Receives the student enrollment information in the**  **attached files.**  **c) Admin updates the student enrollment information in Database.**  **d) Notifies respected Stakeholders**  **Department Head:**  **a) Logs into the system using them**  **User-ID and password.**  **b) Inputs the desired time period for number of students enrolled.**  **Higher Authority (VC/ Dean):**  **a) Logs into the system using their**  **User-ID and password.**  **b) Inputs the desired time period and compare School/Department for the number of students enrolled accordingly.**  **Faculty:**  **a) logs into the system using**  **Faculty ID and**  **password**  **b) Inputs the ID of**  **the section the faculty is taking to view the students**  **enrolled.** | Paper and Stationery:  **a) Used to collect information about students through enrollment forms.** | **Computer/**  **Laptop**  **a) SPMS admin will use Computers to access and update data.**  **b) Users will use the**  **computer to view the data.**  **Database**  **Server**  **a) Used by**  **SPMS**  **Developers to collect data and maintain the software.**  **Networking Devices**  **(Router,**  **Switch,**  **Bridge, Hub):**  **a) Used to**  **access SPMS** | **Operating**  **Software**  **a) Utilized by**  **Registrar**  **Office and**  **SPMS.**  **Student**  **a) Uses to fill**  **up the form**  **from the**  **website.**  **SPMS**  **a) The software for which the administrator will set up user accounts.** | **Register**  **Office**  **Database**  **a) Used by the registrar's office to compile student data into an excel file for sending to SPMS.**  **SPMS**  **a) For any upgrades or new user accounts, information is kept in the database.**  **Excel**  **a) Data from student accounts may be kept in an excel file and used later in SPMS.** | **Internet**  **a) To access and store data to SPMS it is used.**  **b) It is used to collect the student form from the student to registrar office.**  **c)The Registrar office sends all the student information to SPM admin by using it.** |
| **Student Performance Based on CGPA** | **Student:**  **a) Logs into the System using Student-ID and**  **password.**  **b) Inputs the desired time period to view self CGPA**  **Progress.**  **Registrar's Office:**  **a) Logs into the System using User-ID and password.**  **b) Inputs the desired time**  **period and School, Department or program to view**  **Statistically and analyzed CGPA trend of students.**  **Department Head:**  **a) Logs into the System using User-ID and**  **password.**  **b) Inputs the desired time period and school, Department or program.**  **c) View statistically analyzed CGPA trend of students or any**  **individual student.**  **Faculty:**  **a) Logs into the system using**  **Faculty-ID and password.**  **b) Inputs the desired time period and program to view**  **statistically and**  **analyzed CGPA trend of students or any**  **individual student those**  **who attended**  **the faculty’s Section.**  **Higher Authority:**  **a) Logs into the system using their User-ID**  **and password.**  **b) Inputs the**  **desired time period, School and Department**  **c) View statistically analyzed CGPA trend of students.** |  | **Computer/**  **Laptop**  **a) User will need a computer to access SPMS**  **Printer**  **a) Used to print out the report if need be.**  **Networking Devices**  **(Router,**  **Switch,**  **Bridge, Hub):**  **a) Used to**  **access the**  **Internet.** | **Operating**  **Software**  **a) The user uses it to execute SPMS**  **SPMS**  **a) A performance trend will be generated by the software.** | **SPMS**  **Database**  **a) Obtain performance using the database.** | **Internet**  **a) To login into and access the SPMS it is used.** |
| **Course-wise student performance based on CGPA** | **Student:**  **a) Logs into the system using**  **Student-ID and**  **password.**  **b) Inputs the course**  **c) View self**  **GPA for the**  **course.**  **Department Head:**  **a) Logs into the System using User-ID and**  **password.**  **b) Inputs the desired time-**  **period Course-ID**  **c) View statistically analyzed GPA trend of Students.**  **Registrar’s office:**  **a) Logs into the System using**  **Admin-ID and**  **password.**  **b) Inputs the**  **desired time**  **-period and coursed**  **c) view**  **statistically analyzed**  **GPA trend of**  **students.**  **Faculty:**  **a) Logs into the System**  **using**  **Faculty-ID**  **and**  **password.**  **b) Inputs the**  **desired time period**  **Course-ID**  **under the**  **faculty**  **c)view**  **statistically analyzed**  **GPA trend of**  **students who faculty’s**  **section.**  **Higher Authority:**  **a) Logs into**  **the system**  **using their**  **User-ID**  **and**  **password.**  **b) Inputs the**  **desired time-**  **period and**  **Course-ID**  **c)View**  **statistically analyzed**  **GPA trend of**  **students for that specific**  **course.** |  | **Computer/**  **Laptop**  **a) User will need a computer to access SPMS**  **Printer**  **a) Used to print out the report if need be.**  **Networking Devices**  **(Router,**  **Switch,**  **Bridge, Hub):**  **a) Used to**  **access the**  **Internet.** | **SPMS**  **a) A performance trend based on GPA will be generated by the software.** | **SPMS**  **Database**  **a) Here, the performance will be stored and updated.** | **Internet**  **a) To login into and access the SPMS it is used.** |
| **Selective Number of Instructor-wise student performance based on the GPA** | **Department Head:**  **a) Logs into the system using User-ID and password.**  **b) Inputs the**  **desired time-**  **period Course-ID**  **c)View statistically**  **analyzed GPA trend of students for a**  **selective**  **number of**  **Instructors.**  **Registrar’s office:**  **a) Logs into the system using Admin-ID and**  **password.**  **b) Inputs the**  **desired time-**  **period Course-ID**  **c) View statistically**  **analyzed GPA trend of students for a**  **selective number of**  **Instructors**  **Faculty:**  **a) Logs into the system using**  **Faculty-ID and**  **password.**  **b) Inputs the**  **desired time -**  **period & Course-ID**  **c)View statistically**  **analyzed GPA trend of students for a**  **selective number of**  **Instructors.**  **Higher Authority:**  **a) Logs into**  **the System using User-ID and**  **password.**  **b) Inputs the desired time-**  **period Course-ID**  **c) View statistically**  **analyzed GPA trend of students for a**  **selective**  **number of**  **Instructors.** |  | **Computer/**  **Laptop**  **a) User will need a computer to access SPMS**  **Printer**  **a) Used to print out the report if need be.**  **Networking Devices**  **(Router,**  **Switch,**  **Bridge, Hub):**  **a) Used to**  **access the**  **Internet.** | SPMS  **a) The software will produce a performance trend for a specified instructor.** | **SPMS**  **Database**  **a) Here, the performance will be stored and updated.** | **Internet**  **a) To login into and access the SPMS it is used.** |
| **VC-wise, dean-wise, or department head-wise student performance** | **Department Head:**  **a) Logs into the system using User-ID and**  **password.**  **b) Select Input from VC/Dean/Department Head**  **c) View the**  **student**  **performance**  **trend as per choice.**  **Registrar’s office:**  **a) Logs into the system using User-ID and password.**  **b) Select Input from VC/Dean/Department Head**  **c) View the**  **student**  **performance**  **trend as per**  **choice.**  **Dean or VC**  **a) Logs into**  **the system using User-ID and password.**  **b) Select Input from**  **VC/Dean/Department Head**  **c) View the student performance trend as per choice.** |  | **Computer/**  **Laptop**  **a) User will need a computer to access SPMS**  **Printer**  **a) Used to print out the report if need be.**  **Networking Devices**  **(Router,**  **Switch,**  **Bridge, Hub):**  **a) Used to access the Internet.** | **SPMS**  **a) The software will produce a performance trend** | **SPMS**  **Database**  **a) Here, the performance will be stored.** | **Internet**  **a) To login into and access the SPMS it is used.** |
| **Instructor-wise student performance based on the GPA of the students** | **Department Head:**  **a) Logs into the system using**  **Department-I**  **D and Password.**  **b) Inputs a particular**  **instructor Name/ID**  **c)View the**  **student**  **performance**  **trend of**  **selected**  **Instructor.**  **Registrar’s office:**  **a) Logs into the system using User-ID and password.**  **b) Inputs a particular**  **instructor**  **c) View the student performance**  **trend of selected**  **Instructor.**  **Faculty:**  **a) Logs into the system using User-ID and**  **password.**  **b) Input their**  **Name/ID.**  **c) View the**  **student**  **performance**  **trend.**  **Dean:**  **a) Logs into**  **the system**  **using User-ID**  **and**  **password.**  **b) Inputs a**  **particular**  **instructor**  **c)View the**  **student**  **performance**  **trend of**  **selected**  **instructor**  **VC**  **a) Logs into**  **the system**  **using User-ID**  **and**  **password.**  **b) Inputs a**  **particular**  **instructor**  **c)View the**  **student**  **performance**  **trend of**  **selected**  **instructor.** |  | **Computer/**  **Laptop**  **a) User will need a computer to access SPMS**  **Printer**  **a) Used to print out the report if need be.**  **Networking Devices**  **(Router,**  **Switch,**  **Bridge, Hub):**  **a) Used to**  **access the**  **Internet.** | **SPMS**  **a) The software will produce a performance trend** | **SPMS**  **Database**  **a) The**  **performance**  **will be stored**  **and updated**  **in the**  **database.** | **Internet**  **a) To login into and access the SPMS it is used.** |
| **Total PLO percentage achieved and attempted by the student along with the departmental average** | **Student:**  **a) Logs into the system using Student-ID and Password**  **b) Inputs the**  **time- period**  **c)Views their**  **comparison**  **of attempted**  **vs achieved PLO**  **percentage**  **along with**  **the**  **departmental**  **Average.**  **Department Head:**  **a) Logs into the system**  **using User-ID and**  **Password**  **b) Inputs the time- period**  **c) Views the comparison of students**  **attempted**  **PLO vs**  **achieved**  **PLO**  **percentage**  **along with**  **the**  **departmental**  **average.**  **Registrar’s office:**  **a) Logs into the system using User-ID and**  **Password**  **b) Inputs the time- period**  **c) Views the**  **comparison**  **of students**  **Attempted PLO vs**  **Achieved PLO percentage along with the**  **departmental**  **average.**  **Faculty:**  **a) Logs into the system using User-ID and**  **Password.**  **b) Inputs the**  **time period.**  **c) Views the**  **comparison of students attempted PLO vs Achieved PLO**  **percentage**  **along with**  **the**  **departmental**  **Average.**  **Dean**  **a) Logs into**  **the system**  **using User**  **ID and**  **Password**  **b) Inputs the time period**  **c) Views the**  **comparison of students**  **Attempted PLO vs**  **achieved**  **PLO percentage**  **along with**  **the departmental**  **average.**  **VC**  **a) Logs into the system using User-ID and**  **Password.**  **b) Inputs the time- period.**  **c) Views the**  **comparison of students**  **attempted PLO vs Achieved PLO**  **percentage**  **along with**  **the**  **departmental**  **average.** |  | **Computer/**  **Laptop**  **a) User will need a computer to access SPMS**  **Printer**  **a) Used to print out the report if need be.**  **Networking Devices**  **(Router,**  **Switch,**  **Bridge, Hub):**  **a) Used to access the**  **Internet.** | **Operating**  **system**  **a) Used by**  **the**  **SPMS**  **SPMS**  **a) A comparison of the attempted vs. achieved PLO as well as the departmental average will be produced by the software.** | **SPMS**  **Database**  **a) Here, the performance will be stored.** | **Internet**  **a) To login into and access the SPM it is used.** |
| **PLO achievement** | **Student:**  **a) Logs into the system using**  **Student-ID**  **And password.**  **b) Selects PLO achievement**  **c) View PLO**  **Achievement.**  **Department Head:**  **a) Logs into the System using user-ID and**  **password.**  **b) Selects PLO**  **achievement**  **c) View PLO**  **Achievement.**  **Registrar’s office:**  **a) Logs into the system using user-ID and password.**  **b) Selects PLO achievement.**  **c) View PLO**  **Achievement.**  **Faculty:**  **a) Logs into the System using Faculty-ID and**  **password.**  **b) Selects PLO**  **Achievement.**  **c) View PLO**  **Achievement.**  **Dean**  **a) Logs into the System using user-ID and**  **password.**  **b) Selects PLO**  **achievement.**  **c) View PLO**  **Achievement.**  **VC**  **a) Logs into the system using user-ID and password.**  **b) Selects PLO**  **achievement.**  **c) View PLO**  **achievement** |  | **Computer/**  **Laptop**  **a) User will need a computer to access SPMS**  **Printer**  **a) Used to print out the report if need be.**  **Networking Devices**  **(Router,**  **Switch,**  **Bridge, Hub):**  **a) Used to access the Internet.** | **SPMS**  **a) A PLO achievement will be generated by the software.** | **SPMS**  **Database**  **a) Here, the performance will be stored and updated.** | **Internet**  **a) To login into and access the SPM it is used.** |
| **Expected PLO-achievement versus actual score (for course's, student’s,**  **Department’s, program’s or school’s)** | **Student:**  **a) Logs into the system using**  **Student-ID and**  **password.**  **b) Selects PLO**  **achievement**  **comparison**  **c) View PLO**  **achievement**  **Comparison.**  **Department Head:**  **a) Logs into the system using user-ID and**  **password.**  **b) Selects PLO**  **achievement**  **comparison**  **c) View PLO**  **achievement**  **Comparison.**  **Registrar’s office:**  **a) Logs into the system using user-ID and**  **password.**  **b) Selects PLO**  **achievement**  **comparison.**  **c) View PLO**  **achievement**  **comparison.**  **Faculty:**  **a) Logs into the System using**  **Faculty-ID and**  **password.**  **b) Selects PLO**  **achievement**  **comparison.**  **c) view PLO**  **Achievement comparison.**  **Dean**  **a) Logs into the system using user-ID and password.**  **b) Selects PLO**  **achievement**  **comparison.**  **c) View PLO**  **achievement**  **Comparison.**  **VC**  **a) Logs into the system using user-ID and**  **password.**  **b) Selects PLO**  **achievement**  **comparison**  **c) View PLO**  **achievement**  **Comparison.** |  | **Computer/**  **Laptop**  **a) User will need a computer to access SPMS**  **Printer**  **a) Used to print out the report if need be.**  **Networking Devices**  **(Router,**  **Switch,**  **Bridge, Hub):**  **a) Used to**  **access the**  **Internet.** | **SPMS**  **a) A) The software will calculate the expected vs. achieved PLO.** | **SPMS**  **Database**  **a) The**  **performance will be stored and updated in the database.** | **Internet**  **a) To login into and access the SPMS it is used.** |
| **CO-PLO achievement summary** | **Student:**  **a) Logs into the system using**  **Student-ID and**  **password.**  **b) Selects CO -PLO**  **achievement**  **summary.**  **c) View CO- PLO achievement summary.**  **Department Head:**  **a) Logs into the system**  **using user-ID**  **and**  **password.**  **b) Selects**  **CO -PLO**  **achievement**  **summary.**  **c) View CO**  **- PLO**  **achievement**  **Summary.**  **Registrar’s office:**  **a) Logs into the system**  **using user-ID**  **and**  **password.**  **b) Selects**  **CO -PLO**  **achievement**  **summary.**  **c) View CO**  **-PLO**  **achievement**  **Summary.**  **Faculty:**  **a) Logs into the system**  **using**  **Faculty-ID and**  **password.**  **b) Selects CO**  **-PLO**  **achievement**  **summary.**  **c) View CO**  **- PLO**  **achievement**  **Summary.**  **Dean**  **a) Logs into the system**  **using user-ID**  **and**  **password.**  **b) Selects**  **CO -PLO**  **achievement**  **summary.**  **c) View CO**  **- PLO**  **achievement**  **Summary.**  **VC**  **a) Logs into the system using user-ID and**  **password.**  **b) Selects CO**  **-PLO achievement**  **summary.**  **c) view CO**  **- PLO**  **achievement**  **summary.** |  | **Computer/**  **Laptop**  **a) User will need a computer to access SPMS**  **Printer**  **a) Used to print out the report if need be.**  **Networking Devices**  **(Router,**  **Switch,**  **Bridge, Hub):**  **a) Used to**  **access the**  **Internet.** | **SPMS**  **a) The software will produce a summary of CO-PLO accomplishments.** | **SPMS**  **Database**  **a) The**  **Summary**  **will be stored**  **and updated**  **in the**  **database.** | **Internet**  **a) To login into and access the SPMS it is used.** |

**Proposed Processes along with Six System Element Analysis**

The six elements analysis of the proposed system is a continuation of an analysis process where each analysis is based on the one that comes before it. Based on the rich picture, the role of each element in the new system is further understood in the table below.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Process** | **System Roles** | | | | | |
| **Human** | **Non-Computing Hardware** | **Computing Hardware** | **Software** | **Database** | **Network and Communication** |
| **Student Registration** | Student:  a) Search for the website  b) Goes to the website.  c) Clicks  on the  form  option.  c) Fill up the  form with  required  Information.  Admin:  a) Admin  logs into  the system  using  SPMS  User-ID and  password.  b)  Receives  the student  enrollment information in the  attached  files.  c) Admin  updates the  student  enrollment information in  Database.  d) Inputs  the desired  time  period for  number of  students  enrolled. | Paper and Stationery:  a) Used to collect information about students through enrollment forms. | Computer/  Laptop  a) SPMS admin will use Computers to access and update data.   b) Users will use the  computer to view the data.  Database  Server  a) Used by  SPMS  Developers to collect data and maintain the software.  Networking Devices  (Router,  Switch,  Bridge, Hub):  a) Used to  access SPMS | Operating  Software  a) Utilized by  Registrar  Office and  SPMS  Student  a) Uses to fill  up the form  from the  website.  SPMS  a) The software for which the administrator will set up user accounts. | Register  Office  Database  a) Used by the registrar's office to compile student data into an excel file for sending to SPMS.  SPMS  a) For any upgrades or new user accounts, information is kept in the database.  Excel  a) Data from student accounts may be kept in an excel file and used later in SPMS. | Internet  a) To access and store data to SPMS it is used.  b) It is used to collect the student form from the student to registrar office.  c)The Registrar office sends all the student information to SPMS admin by using it. |
| Student Performance Based on CGPA | Student:  a) Logs into  the System  using  Student-ID  and  password.  b) Inputs the desired time - period to  view self  CGPA  Progress.  Admin:  a) Logs into  the System  using User-ID  and  password.  b) Inputs the  desired time  period and  School,  Department or program to view.  Statistically and analyzed.  CGPA trend  of students.  Faculty:  a) Logs into the system  using  Faculty-ID  and  password.  b) Inputs the  desired time  -period and  program to view.  statistically and  analyzed  CGPA trend  of students or any  individual’s student those  who attended.  the faculty’s  Section. |  | Computer/  Laptop  a) User will need a computer to access SPMS  Printer  a) Used to print out the report if need be.  Networking Devices  (Router,  Switch,  Bridge, Hub):  a) Used to  access the  Internet. | Operating  Software  a) The user uses it to execute SPMS 2.0  SPMS  a) A performance trend will be generated by the software. | SPMS  Database  a) Obtain performance using the database. | Internet  a) To login into and access the SPMS it is used. |
| Course-wise student performance based on CGPA | Student:  a) Logs into the system  using  Student-ID  and  password.  b) Inputs the  course  c) View self  GPA for the  course. **Admin:**  a) Logs into the System  using User-ID and  password.  b) Inputs the desired time-  period  Course-ID  c) View statistically analyzed  GPA trend of  Students.  Faculty:  a) Logs into the System  using  Faculty-ID  and  password.  b) Inputs the  desired time  -  period  Course-ID  under the  faculty  c)view  statistically analyzed.  GPA trend of  students who faculty’s  section. |  | Computer/  Laptop  a) User will need a computer to access SPMS  Printer  a) Used to print out the report if need be.  Networking Devices  (Router,  Switch,  Bridge, Hub):  a) Used to  access the  Internet. | SPMS  a) A performance trend based on GPA will be generated by the software. | SPMS  Database  a) Here, the performance will be stored and updated. | Internet  a) To login into and access the SPMS it is used. |
| Selective Number of Instructor-wise student performance based on the GPA | Admin:  a) Logs into the system  using User-ID and  password.  b) Inputs the  desired time-  period  Course-ID  c)View  statistically  analyzed  GPA trend of  students for a  selective  number of  Instructors.  Faculty:  a) Logs into the system  using  Faculty-ID  and  password.  b) Inputs the  desired time -  period &  Course-ID  c)View  statistically  analyzed  GPA trend of  students for a  selective  number of  Instructors.  GPA trend of  students for a  selective  number of  Instructors. |  | Computer/  Laptop  a) User will need a computer to access SPMS  Printer  a) Used to print out the report if need be.  Networking Devices  (Router,  Switch,  Bridge, Hub):  a) Used to  access the  Internet. | SPMS  a) a) The software will produce a performance trend for a specified instructor. | SPMS  Database  a) Here, the performance will be stored and updated. | Internet  a) To login into and access the SPMS it is used. |
| Admin wise student performance | Admin:  a) Logs into the system  using User-ID  and  password.  b) Select  Input from  from  VC/Dean/Department  Head  c) View the  student  performance  trend as per  choice. |  | Computer/  Laptop  a) User will need a computer to access SPMS  Printer  a) Used to print out the report if need be.  Networking Devices  (Router,  Switch,  Bridge, Hub):  a) Used to  access the  Internet. | SPMS  a) The software will produce a performance trend | SPMS  Database  a) Here, the performance will be stored. | Internet  a) To login into and access the SPM it is used. |
| Instructor-wise student performance based on the GPA of the students | Admin:  a) Logs into the system  using  Department-I  D and  Password. b) Inputs a  particular  instructor  Name/ID  c)View the  student  performance  trend of  selected  Instructor.  Faculty:  a) Logs into the system  using User-ID and  password.  b) Input them  Name/ID.  c) View the  student  performance  trend. |  | Computer/  Laptop  a) User will need a computer to access SPMS  Printer  a) Used to print out the report if need be.  Networking Devices  (Router,  Switch,  Bridge, Hub):  a) Used to  access the  Internet. | SPMS  a) The software will produce a performance trend | SPMS  Database  a) The  performance  will be stored.  and updated.  in the  database. | Internet  a) To login into and access the SPM it is used. |
| Total PLO percentage achieved and attempted by the student along with the departmental average | Student:  a) Logs into the system  using Student-ID and  Password  b) Inputs the  time- period  c)Views their  comparison  of attempted.  vs achieved PLO.  percentage  along with  the  departmental  Average.  Admin:  a) Logs into the system  using User-ID and  Password  b) Inputs the time- period  c) Views the comparison of students  attempted  PLO vs  achieved  PLO  percentage  along with  the  departmental  average.  Faculty:  a) Logs into the system  using User-ID and  Password.  b) Inputs the  time period.  c) Views the  comparison of students  attempted  PLO vs  achieved  PLO  percentage  along with  the  departmental  Average. |  | Computer/  Laptop  a) User will need a computer to access SPMS  Printer  a) Used to print out the report if need be.  Networking Devices  (Router,  Switch,  Bridge, Hub):  a) Used to  access the  Internet. | Operating  system  a) Used by  the  SPMS  SPMS  a) A comparison of the attempted vs. achieved PLO as well as the departmental average will be produced by the software. | SPMS  Database  a) Here, the performance will be stored. | Internet  a) To login into and access the SPM it is used. |
| PLO achievement | Student:  a) Logs into the system  using  Student-ID  and  password. b) Selects  PLO  achievement  c) View PLO  Achievement.  Admin:  a) Logs into the System  using user-ID  and  password.  b) Selects  PLO  achievement  c) View PLO  Achievement.  Faculty:  a) Logs into  the System  using  Faculty-ID and  password.  b) Selects  PLO  Achievement.  c) View PLO  Achievement. |  | Computer/  Laptop  a) User will need a computer to access SPMS  Printer  a) Used to print out the report if need be.  Networking Devices  (Router,  Switch,  Bridge, Hub):  a) Used to  access the  Internet. | SPMS  a) A PLO achievement will be generated by the software. | SPMS  Database  a) Here, the performance will be stored and updated. | Internet  a) To login into and access the SPMS it is used. |
| Expected PLO-achievement versus actual score (for course's, student’s,  Department’s, program’s or school’s) | Student:  a) Logs into the system  using  Student-ID  and  password.  b) Selects  PLO  achievement  comparison  c) View PLO  achievement  Comparison.  Admin:  a) Logs into the system  using user-ID  and  password.  b) Selects  PLO  achievement  comparison  c) View PLO  achievement  Comparison.  Faculty:  a) Logs into the System  using  Faculty-ID and  password.  b) Selects  PLO  achievement  comparison.  c) view PLO  Achievement comparison. |  | Computer/  Laptop  a) User will need a computer to access SPMS  Printer  a) Used to print out the report if need be.  Networking Devices  (Router,  Switch,  Bridge, Hub):  a) Used to  access the  Internet. | SPMS  a) A) The software will calculate the expected vs. achieved PLO. | SPMS  Database  a) The  performance  will be stored  and updated  in the  database. | Internet  a) To login into and access the SPMS it is used. |
| CO-PLO achievement summary | Student:  a) Logs into the system  using  Student-ID  and  password.  b) Selects  CO -PLO  achievement  summary.  c) View CO- PLO achievement summary.  Admin:  a) Logs into the system  using user-ID  and  password.  b) Selects  CO -PLO  achievement  summary.  c) View CO  - PLO  achievement  Summary.  Faculty:  a) Logs into the system  using  Faculty-ID and  password.  b) Selects CO  -PLO  achievement  summary.  c) View CO  - PLO  achievement  Summary. |  | Computer/  Laptop  a) User will need a computer to access SPMS  Printer  a) Used to print out the report if need be**.**  Networking Devices  (Router,  Switch,  Bridge, Hub):  a) Used to  access the  Internet. | SPMS  a) The software will produce a summary of CO-PLO accomplishments. | SPMS  Database  a) The  Summary  will be stored  and updated  in the  database. | Internet  a) To login into and access the SPMS it is used. |
| CO percentage based on the obtained grades for each course summary | Student:  a) Logs into the system  using  Student-ID  and  password.  b) View CO percentage based on the obtained grades for each course summary.  Admin:  a) Logs into the system  using user-ID and password.  b) Selects  CO percentage based on the obtained grades for each course summary.  c) View CO percentage based on the obtained grades for each course summary.  Faculty:  a) Logs into the system  using  Faculty-ID and  password.  b) PLO Achievement Analysis graph of the Faculty’s Department. |  | Computer/  Laptop  a) User will need a computer to access SPMS  Printer  a) Used to print out the report if need be**.**  Networking Devices  (Router,  Switch,  Bridge, Hub):  a) Used to  access the  Internet. | SPMS  a) The software will produce a summary of CO percentage based on the obtained grades for each course accomplishments. | SPMS  Database  a) The  Summary  will be stored  and updated  in the  database. | Internet  a) To login into and access the SPMS it is used. |
| Checking Cumulative GPA, COs and PLOs | Student:  (a) Student Logs into the System.  (b)checks the Dashboard Cumulative GPA, Earned Credit, Course-wise COs, PLO Analysis Graph of that logged in Student in the Dashboard.  Faculty:  (a)Logs into the system  (b) Checks Department Wise CO-PLO achievement graph analysis in the Dashboard.  Admin:  (a)Logs into the system  (b) Checks any department’s CO-PLO achievement | Paper and Stationery:  a) Used to collect information about students through enrollment forms. | Computer/  Laptop  a) SPMS admin will use Computers to access and update data.   b) Users will use the  computer to view the data.  Database  Server  a) Used by  SPMS  Developers to collect data and maintain the software.  Networking Devices  (Router,  Switch,  Bridge, Hub):  a) Used to  access SPMS | Operating  Software  a) Utilized by  Registrar  Office and  SPMS  Student  a) Uses to fill  up the form  from the  website.  SPMS  a) The software for which the administrator will set up user accounts. | Register  Office  Database  a) Used by the registrar's office to compile student data into an excel file for sending to SPMS.  SPMS  a) For any upgrades or new user accounts, information is kept in the database.  Excel  a) Data from student accounts may be kept in an excel file and used later in SPMS. | Internet  a) To access and store data to SPMS it is used.  b) It is used to collect the student form from the student to registrar office.  c)The Registrar office sends all the student information to SPMS admin by using it. |
| Submitting Grades, COs | Student:  (a)Students only participate in their assessments.  Faculty:  (a)Logs into the system  (b)Submits Grades and CO1, CO2, CO3 and CO4 of each student by importing formatted CSV file.  (c)Grades imported successfully.  Faculty:  (a)Logs into the system  (b)Submits Grades and CO1, CO2, CO3 and CO4 of each student by inserting the values in form manually.  (c)Grades imported successfully. | Paper and Stationery:  a) Used to collect information about students through enrollment forms. | Computer/  Laptop  a) SPMS admin will use Computers to access and update data.   b) Users will use the  computer to view the data.  Database  Server  a) Used by  SPMS  Developers to collect data and maintain the software.  Networking Devices  (Router,  Switch,  Bridge, Hub):  a) Used to  access SPMS | Operating  Software  a) Utilized by  Registrar  Office and  SPMS  Student  a) Uses to fill  up the form  from the  website.  SPMS  a) The software for which the administrator will set up user accounts. | Register  Office  Database  a) Used by the registrar's office to compile student data into an excel file for sending to SPMS.  SPMS  a) For any upgrades or new user accounts, information is kept in the database.  Excel  a) Data from student accounts may be kept in an excel file and used later in SPMS. | Internet  a) To access and store data to SPMS it is used.  b) It is used to collect the student form from the student to registrar office.  c)The Registrar office sends all the student information to SPMS admin by using it. |
| Download/ Generate Academic Transcript in PDF, OBE | Student:  (a) Student Logs into the System.  (b)Download Transcript of that logged in Student User  Faculty:  (a)Logs into the System  (b) generate OBE report of Course  (c)OBE report Downloaded successfully.  (d) View CSV of OBE report | Paper and Stationery:  a) Used to Print the Academic Transcript for the Student’s official use | Computer/  Laptop  a) SPMS admin will use Computers to access and update data.   b) Users will use the  computer to view the data.  Database  Server  a) Used by  SPMS  Developers to collect data and maintain the software.  Networking Devices  (Router,  Switch,  Bridge, Hub):  a) Used to  access SPMS | Operating  Software  a) Utilized by  Registrar  Office and  SPMS  Student  a) Uses to fill  up the form  from the  website.  SPMS  a) The software for which the administrator will set up user accounts. | Register  Office  Database  a) Used by the registrar's office to compile student data into an excel file for sending to SPMS.  SPMS  a) For any upgrades or new user accounts, information is kept in the database.  Excel  a) Data from student accounts may be kept in an excel file and used later in SPMS. | Internet  a) To access and store data to SPMS it is used.  b) It is used to collect the student form from the student to registrar office.  c)The Registrar office sends all the student information to SPMS admin by using it. |