Design UML for CTEM

1. **Analyze System:**
   1. **Identity Actor and Use case**

Form analyze requirement, we have ? actors and ? usecases:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No | Actor | Quantity | Operate with system | Use case |
| 1 | User | More | Login | UC\_Login |
| 2 | Manager DB | 1 | Manage DB Info | UC\_Mg\_DB\_Info |
| 3 | Supper Admin | 1 | Manage Menu   * Create Menu * Update Menu * Delete Menu | UC\_Mg\_Menu   * UC\_C\_Menu * UC\_U\_Menu * UC\_D\_Menu |
| 4 | Admin | 1 | Manage Employee   * View Employee   + Search Employee * Create Employee * Update Employee * Delete Employee * Delegate for Employee   Manage Rights   * Create Right * Update Right * Delete Right   Mange Role   * Create Role * Update Role * Delete Role | UC\_Mg\_Emp   * UC\_V\_Emp   + UC\_S\_Emp * UC\_C\_Emp * UC\_U\_ Emp * UC\_D\_ Emp * UC\_Delegate\_ Emp   UC\_Mg\_Right   * UC\_C\_Right * UC\_U\_ Right * UC\_D\_ Right   UC\_Mg\_Role   * UC\_C\_Role * UC\_U\_ Role * UC\_D\_ Role |
| 5 | Manager | 1 | Manage Employee   * View Employee   + Search Employee * Create Employee * Update Employee * Delete Employee * Delegate for Employee   Manage Construction   * View Construction   + Search Construction * Create Construction   + Subcontractors (→ UC\_C\_Subc)   + Estimate (→ UC\_C\_Est)   + Non Estimate * Update Construction * Delete Construction * View Report Construction (have filters)   Manage Subcontractors   * View Subcontractors   + Search Subcontractors * View Report (have filters) * Create Subcontractors * Update Subcontractors * Delete Subcontractors   Manage Estimate   * View Estimate   + Search Estimate * View Report (have filters)   Manage Final Account   * View Final Account   + Search Final Account * View Report (have filters)   Manage Debt   * View Debt   + Search Debt * View Report (have filters)   Manage Warehouse   * View Warehouse   + Search Warehouse * View Report (have filters)   Manage Worker   * View Worker   + Search Worker * View Report (have filters) | 1. UC\_Mg\_Emp  * UC\_V\_Emp   + UC\_S\_Emp * UC\_C\_Emp * UC\_U\_ Emp * UC\_D\_ Emp * UC\_Delegate\_ Emp  1. UC\_Mg\_Constr  * UC\_V\_Constr   + UC\_S\_Constr * UC\_C\_Constr   + UC\_Subc (→ UC\_C\_Subc   + UC\_Est   + UC\_Non\_Est * UC\_U\_Constr * UC\_D\_Constr * UC\_R\_Constr  1. UC\_Mg\_Subc  * UC\_V\_Subc   + UC\_S\_Subc * UC\_R\_Subc * UC\_C\_Subc * UC\_U\_Subc * UC\_D\_Subc  1. UC\_Mg\_Est  * UC\_V\_ Est   + UC\_S\_ Est * UC\_R\_ Est  1. UC\_Mg\_Final \_Acc  * UC\_V\_ Final \_Acc   + UC\_S\_ Final \_Acc * UC\_R\_ Final \_Acc  1. UC\_Mg\_Debt  * UC\_V\_ Debt   + UC\_S\_Debt * UC\_R\_ Debt  1. UC\_Mg\_Whouse  * UC\_V\_ Whouse   + UC\_S\_ Whouse * UC\_R\_ Whouse  1. UC\_Mg\_Worker  * UC\_V\_ Worker   + UC\_S\_ Worker * UC\_R\_ Worker |
| 6 | Chief Accountant | 1 | Manage Employee   * View Employee   + Search Employee * Create Employee * Update Employee * Delete Employee * Delegate for Employee   Manage Construction   * View Construction   + Search Construction * Create Construction   + Subcontractors (→ UC\_C\_Subc)   + Estimate (→ UC\_C\_Est)   + Non Estimate * Update Construction * Delete Construction * View Report Construction (have filters)   Manage Subcontractors   * View Subcontractors   + Search Subcontractors * View Report (have filters) * Create Subcontractors * Update Subcontractors * Delete Subcontractors   Manage Estimate   * View Estimate   + Search Estimate * View Report (have filters)   Manage Final Account   * View Final Account   + Search Final Account * View Report (have filters)   Manage Debt   * View Debt   + Search Debt * View Report (have filters)   Manage Warehouse   * View Warehouse   + Search Warehouse * View Report (have filters)   Manage Worker   * View Worker   + Search Worker   View Report (have filters) | UC\_Mg\_Emp   * UC\_V\_Emp   + UC\_S\_Emp * UC\_C\_Emp * UC\_U\_ Emp * UC\_D\_ Emp * UC\_Delegate\_ Emp   UC\_Mg\_Constr   * UC\_V\_Constr   + UC\_S\_Constr * UC\_C\_Constr   + UC\_Subc (→ UC\_C\_Subc   + UC\_Est   + UC\_Non\_Est * UC\_U\_Constr * UC\_D\_Constr * UC\_R\_Constr   UC\_Mg\_Subc   * UC\_V\_Subc   + UC\_S\_Subc * UC\_R\_Subc * UC\_C\_Subc * UC\_U\_Subc * UC\_D\_Subc   UC\_Mg\_Est   * UC\_V\_ Est   + UC\_S\_ Est * UC\_R\_ Est   UC\_Mg\_Final \_Acc   * UC\_V\_ Final \_Acc   + UC\_S\_ Final \_Acc * UC\_R\_Subc   UC\_Mg\_Debt   * UC\_V\_ Debt   + UC\_S\_Debt * UC\_R\_ Debt   UC\_Mg\_Whouse   * UC\_V\_ Whouse   + UC\_S\_ Whouse * UC\_R\_ Whouse   UC\_Mg\_Worker   * UC\_V\_ Worker   + UC\_S\_ Worker   UC\_R\_ Worker |
| 7 | Accountant | More | Manage Employee   * View Employee   + Search Employee   Manage Construction   * View Construction   + Search Construction * View Report Construction (have filters)   Manage Subcontractors   * Manage Disbursement * View Subcontractors   + Search Subcontractors * View Report (have filters)   Manage Estimation   * Create Estimation * Update Estimation * Delete Estimation * Create Estimation Detail * Update Estimation Detail * Delete Estimation Detail * View Estimation   + Search Estimation   + View Estimation Detail     - Search Estimation Detail * View Report (have filters) * Relate to Material   Manage Final Account   * Create Final Account * Update Final Account * Delete Final Account * Create Final Account Detail * Update Final Account Detail * Delete Final Account Detail * View Final Account   + Search Final Account   + View Final Account Detail     - Search Final Account Detail * View Report (have filters) * Relate to Material * Relate to Warehouse * Relate to Estimate   Manage Debt   * Create Debt * Update Debt * Delete Debt * View Debt   + Search Debt * View Report (have filters) * Relate to Final Account   Manage Warehouse   * Create Warehouse * Update Warehouse * Delete Warehouse * View Warehouse   + Search Warehouse * View Report (have filters)   Manage Stock Out   * Create Stock Out * Update Stock Out * Delete Stock Out * View Stock Out   + Search Stock Out * View Report (have filters) * Relate to Warehouse * Relate to Estimate Detail   Manage Worker   * Create Worker Salary * Update Worker Salary * Delete Worker Salary * Create Worker * Update Worker * Delete Worker * View Worker Salary   + Search Worker Salary   + Search Worker * View Report (have filters)   Manage Material   * Create Material * Update Material * Delete Material * View Material   + Search Material | UC\_Mg\_Emp   * UC\_V\_Emp   + UC\_S\_Emp   UC\_Mg\_Constr   * UC\_V\_Constr   + UC\_S\_Constr * UC\_R\_Constr   UC\_Mg\_Subc   * UC\_Mg\_Disb * UC\_V\_Subc   + UC\_S\_Subc * UC\_R\_Subc   UC\_Mg\_Est   * UC\_C\_Est * UC\_U\_Est * UC\_D\_Est * UC\_C\_Est\_Detail * UC\_U\_Est\_Detail * UC\_D\_Est\_Detail * UC\_V\_ Est   + UC\_S\_ Est   + UC\_V\_Est\_Detail     - UC\_S\_Est\_Detail * UC\_R\_ Est * UC\_Relate\_Mat   UC\_Mg\_Final \_Acc   * UC\_C\_Final\_Acc * UC\_U\_Final\_Acc * UC\_D\_Final\_Acc * UC\_C\_Final\_Acc\_Detail * UC\_U\_Final\_Acc\_Detail * UC\_D\_Final\_Acc\_Detail * UC\_V\_ Final \_Acc   + UC\_S\_ Final \_Acc   + UC\_V\_Acc\_Detail     - UC\_S\_Acc\_Detail * UC\_R\_Final\_Acc * UC\_Relate\_Mat * UC\_Relate\_Whouse * UC\_Relate\_Est   UC\_Mg\_Debt   * UC\_C\_Debt * UC\_U\_Debt * UC\_D\_Debt * UC\_V\_ Debt   + UC\_S\_Debt * UC\_R\_ Debt * UC\_Relate\_Final\_Acc   UC\_Mg\_Whouse   * UC\_C\_Whouse * UC\_U\_Whouse * UC\_D\_Whouse * UC\_V\_ Whouse   + UC\_S\_ Whouse * UC\_R\_ Whouse   UC\_Mg\_StockOut   * UC\_C\_ StockOut * UC\_U\_ StockOut * UC\_D\_ StockOut * UC\_V\_ StockOut   + UC\_S\_ StockOut * UC\_R\_ StockOut * UC\_Relate\_Whouse * UC\_Relate\_Est\_Detail   UC\_Mg\_Worker   * UC\_C\_Wker\_Sal * UC\_U\_Wker\_Sal * UC\_D\_Wker\_Sal * UC\_C\_Worker * UC\_U\_ Worker * UC\_D\_ Worker * UC\_V\_ Wker\_Sal   + UC\_S\_Wker\_Sal   + UC\_S\_ Worker * UC\_R\_ Wker\_Sal   UC\_Mg\_Mat   * UC\_C\_Mat * UC\_U\_Mat * UC\_D\_Mat * UC\_V\_Mat   + UC\_S\_Mat |
| 8 | Cashier | 1 | Manage Employee   * View Employee   + Search Employee * Manage Employee Salary   + Create Employee Salary   + Update Employee Salary   + Delete Employee Salary   + View Employee Salary     - Search Employee Salary   + View Report (have filters) * Manage Employee Advance   + Create Employee Advance   + Update Employee Advance   + Delete Employee Advance   + View Employee Advance     - Search Employee Adv   + View Report   Manage Comparison Debt   * Create Comparison Debt * Update Comparison Debt * Delete Comparison Debt * View Comparison Debt   + Search Comparison Debt * View Report (have filters) * Relate to Debt * Relate to Final Account | UC\_Mg\_Emp   * UC\_V\_Emp   + UC\_S\_Emp * UC\_Mg\_Emp\_Sal   + UC\_C\_ Emp\_Sal   + UC\_U\_ Emp\_Sal   + UC\_D\_ Emp\_Sal   + UC\_V\_Emp\_Sal     - UC\_S\_ESa   + UC\_R\_Emp\_Sal * UC\_Mg\_Emp\_Adv   + UC\_C\_ Emp\_ Adv   + UC\_U\_ Emp\_ Adv   + UC\_D\_ Emp\_ Adv   + UC\_V\_Emp\_ Adv     - UC\_S\_EAd   + UC\_R\_Emp\_ Adv   UC\_Mg\_Compa\_Debt   * UC\_C\_ Compa\_Debt * UC\_U\_ Compa\_Debt * UC\_D\_ Compa\_Debt * UC\_V\_ Compa\_Debt   + UC\_S\_ComDebt * UC\_R\_ Compa\_Debt * UC\_Relate\_Debt * UC\_Relate\_Final\_Acc |

Function List:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Function | Function Children | Assigned To | Date | Status |
| Manage Right | Create Right  Update Right  Delete Right | TienDH |  | Fisnish |
| Manage Role | Create Role  Update Role  Delete Role | TienDH | From: 29-05-2011  To: 29-05-2011 |  |
| Manage Employee | View Employee   * Search Employee   Create Employee  Update Employee  Delete Employee  Delegate for Employee  Manage Employee Salary   * Create Employee Salary * Update Employee Salary * Delete Employee Salary * View Employee Salary   + Search Employee Salary * View Report (have filters)   Manage Employee Advance   * Create Employee Advance * Update Employee Advance * Delete Employee Advance * View Employee Advance   + Search Employee Adv * View Report | TienDH | From: 29-05-2011  To: 31-05-2011 |  |
| Manage Construction | * View Construction   + Search Construction * Create Construction   + Subcontractors (→ UC\_C\_Subc)   + Estimate (→ UC\_C\_Est)   + Non Estimate * Update Construction * Delete Construction * View Report Construction (have filters) | VuongNQ | From: 29-05-2011 |  |
| Manage Estimate | Create Estimation  Update Estimation  Delete Estimation  Create Estimation Detail  Update Estimation Detail  Delete Estimation Detail  View Estimation   * Search Estimation * View Estimation Detail   + Search Estimation Detail   View Report (have filters)  Relate to Material | VuongNQ | From: 30-05-2011  To: 31-05-2011 |  |
| Manage Subcontractor | View Subcontractors   * Search Subcontractors   View Report (have filters)  Create Subcontractors  Update Subcontractors  Delete Subcontractors | VuongNQ | From: 01-06-2011  To: 01-06-2011 |  |
| Manage Material | Create Material  Update Material  Delete Material  View Material  Search Material | TienDH | From: 01-06-2011  To: 01-06-2011 |  |
| Manage Final Account | Create Final Account  Update Final Account  Delete Final Account  Create Final Account Detail  Update Final Account Detail  Delete Final Account Detail  View Final Account   * Search Final Account * View Final Account Detail   + Search Final Account Detail   View Report (have filters)  Relate to Material  Relate to Warehouse  Relate to Estimate | TienDH | From: 02-06-2011  To: 03-06-2011 |  |
| Manage Debt | Create Debt  Update Debt  Delete Debt  View Debt   * Search Debt   View Report (have filters)  Relate to Final Account | VuongNQ | From: 02-06-2011  To: 02-06-2011 |  |
| Manage Warehouse | Create Warehouse  Update Warehouse  Delete Warehouse  View Warehouse   * Search Warehouse   View Report (have filters) | TienDH | From: 04-06-2011  To: 04-06-2011 |  |
| Manage Worker | Create Worker Salary  Update Worker Salary  Delete Worker Salary  Create Worker  Update Worker  Delete Worker  View Worker Salary   * + Search Worker Salary   + Search Worker   View Report (have filters) | VuongNQ | From: 03-06-2011  To: 03-06-2011 |  |
| Manage Comparison Debt | * Create Comparison Debt * Update Comparison Debt * Delete Comparison Debt * View Comparison Debt   + Search Comparison Debt * View Report (have filters)   Relate to Debt  Relate to Final Account | VuongNQ | From: 04-06-2011  To: 04-06-2011 |  |
| Manage Stock Out | Create Stock Out  Update Stock Out  Delete Stock Out  View Stock Out   * Search Stock Out   View Report (have filters)  Relate to Warehouse  Relate to Estimate Detail | TienDH | From: 05-06-2011  To: 05-06-2011 |  |