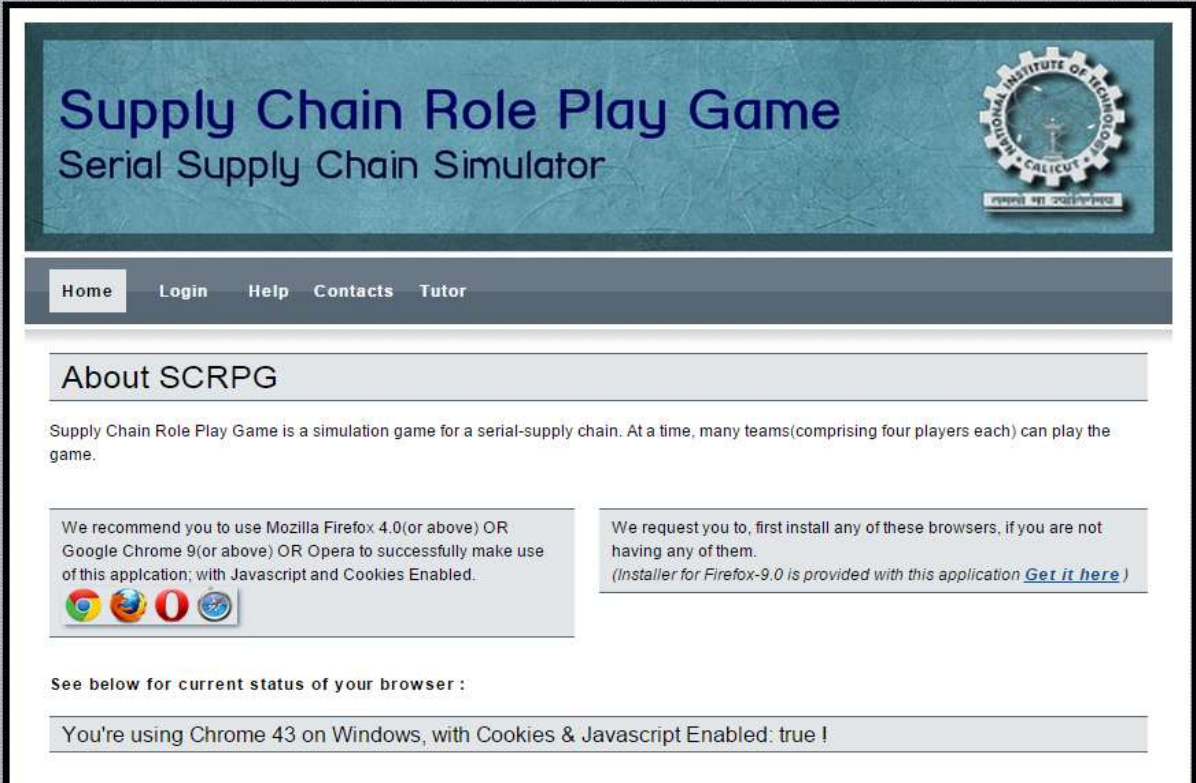# Supply Chain and System Simulation Laboratory

Home pages of Software packages developed in house

List of software packages

1. Supply Chain Role Play Game
2. Vendor Managed Inventory-Based Supply Chain Role Play Game
3. Real-time Collaborative Supply Chain Role Play Game Using Google Spreadsheet
4. Supply Chain Inventory Policy Analyser
5. Performance Analysis of a Serial Supply Chain under Different Inventory Policies
6. Layout Planning
7. Manufacturing System Simulator for Performance Evaluation
8. Material Requirement Planning (MRP) Package

VENDOR MANAGED INVENTORY BASED SUPPLY CHAIN ROLE PLAY GAME

Home   Login   Help

About VMISCRPG

VMI-Based Supply Chain Role Play Game is a simulation game for a serial-supply chain. At a time, many teams(comprising four players each) can play the game.

We recommend you to use Mozilla Firefox 4.0(or above) OR Google Chrome 9(or above) OR Opera to successfully make use of this application; with Javascript and Cookies Enabled.

We request you to, first install any of these browsers, if you are not having any of them.
(Installer for Firefox-9.0 is provided with this application Get it here)

See below for current status of your browser :

You're using Chrome 26 on Windows, with Cookies & Javascript Enabled: true !

2015

Real-time Collaborative Supply Chain Role Play Game Using Google Spreadsheet

SUPPLY CHAIN INVENTORY POLICY ANALYSER

USERNAME Your Username

PASSWORD Your Password

ENTER

PERFORMANCE EVALUATION OF A SERIAL SUPPLY CHAIN UNDER DIFFERENT INVENTORY POLICIES

Click here to read Instructions & Abbreviations before proceed

1. CUSTOMER DEMAND

Distribution	Normal	
Parameters	Mean	Std. dev.
	20	5

2. POLICY DETAILS

	Retailer	Wholesaler	Distributor	Factory
Type	OUL	OUL	OUL	OUL
Period nature	Weeks			
Environment	Lost sales			

3. LEAD TIME

Order		Delivery	
R to W	0	W to R	1
W to D	0	D to W	1
D to F	0	F to D	1
F to P	0	P to F	1

4. REVIEW PERIOD

Retailer	1
Wholesaler	1
Distributor	1
Factory	1

5. INITIAL INVENTORY

Retailer	40
Wholesaler	40
Distributor	40
Factory	40

6. FORECAST

	Mean CD	Period	First period value
Retailer	Unknown	2	20
Wholesaler	Unknown	2	20
Distributor	Unknown	2	20
Factory	Unknown	2	20

7. COST (Rs.)

	Order	Transportation	Holding	Lost-Sales
Retailer	200	50	20	60
Wholesaler	150	40	18	50
Distributor	100	30	16	45
Factory	50	0	12	40

8. SIMULATION DETAILS

Length of simulation periods	55
No. of replications	10

9. EVALUATION PERIOD

Beginning	8
Ending	48

Submit   Clear Contents

Input / Retailer / Wholesaler / Distributor / Factory / Performance / Testing / Graphical Analysis / Q Policy Combination

LAYOUT PLANNING

Home Create Layout Previous Layout Contact Help

Layout planning software package allows the user to specify the locations of departments/facilities and calculates material handling cost for the proposed layout. Also, this package can generate random layout and the respective cost for material handling can be calculated.

The package uses MATLAB codes for developing a good layout showing relative location of the departments. The codes developed are for the Quadratic Assignment Formulation (QAP) of the Layout problem and the solution procedure used is Simulate Annealing (SA) algorithm. Rectilinear distance measures are used and unit size departments are assumed. However, the package displays the solution with actual size of department. Also, the package allows to use aisles between departments, and rearranging of departments (swapping of two departments) to meet the practical requirements. The material handling cost of the generated layout is displayed immediately. Thus, this package helps the layout designer to choose appropriate layout.

MANUFACTURING SYSTEM SIMULATOR FOR PERFORMANCE EVALUATION

HOME STATIC DEMAND DYNAMIC DEMAND HELP FILE CONTACT

This is a manufacturing system simulator.

Simulate the performance of a manufacturing system.

Annual demand, layout configuration, process plan are required for evaluating the performance of the manufacturing system.

Dynamic and static demand environments are considered.

MRP PACKAGE

Add End Product in the Company	Minimum Planning Horizon
Enter BOM	Product Tree Structure
Enter MPS	Low Level Code Display
Inventory/Product Editing	MRP Calculation
Planned Order Releases	Gantt Chart (Forward Schedule)
Pegging	Scheduled Receipt
MRP SEARCH	Print All MRP Records
Bottom-up Re-planning	Display MRP Records from DB
Reports printing	Help & Contact