Redstage_BoqConfigurator

1. Overview

A. Purpose
This module purpose creates customize configurator page, here customer choose his/her selection configuration and base on selection all product will be show with qty. Customer can change qty or remove qty after that he can print quote and email send to admin configure email with quote items data.

Customer also search nearest shop base on pin code.

If customer want save his quote than login is required.

Pre-Configuration Options:
- 1BHK
- 2BHK
- 3BHK
- 4BHK

- Bedroom **ADD**
- Living Room **ADD**
- Kitchen **ADD**
- Bathroom **ADD**
- Passage **ADD**

X **Living Room** — Range dropdown
ARTEOR
MYRIUS NEXTGEN
MYRIUS
MYLINC
LYNCUS
BRITZY

X **Bedroom** — ARTEOR

Cat Ref	Product Name	Description	QTY	Price
573400	6AX SWITCH SP 1W1M AR	GATEWAY	1	100
573402	6AX SWITCH SP 2W1M AR	6AX SWITCH SP 1W1M AR	14	140
573413	6A BELL PUSH 1W1M AR	6AX SWITCH SP 2W1M AR	16	260
573470	SOCKET 6A UNIVERSAL INDIA AR	16A 1 Way Switch	9	900

X **Kitchen** — BRITZY

X **Passage** — ARTEOR With Automation

X **Bedroom-2** — MYRIUS

Create Quote

Cat Ref	Product	Description	Living Room	Bedroom	Kitchen	Passage	Bedroom-2	Price
123532	Gateway switch	GATEWAY	1					₹100.00
573400	6AX SWITCH SP 1W1M AR	6AX SWITCH SP 1W1M AR	14					₹3000.00
573402	6AX SWITCH SP 2W1M AR	6AX SWITCH SP 2W1M AR	18					₹800.00
573404	16A 1 Way Switch	16A 1 Way Switch	22					₹600.00
573410	20A SWITCH SP 1W1M AR	20A SWITCH SP 1W1M AR		20				₹3000.00
573411	25A SWITCH	32A Double Pole Switch with Indicator		14				₹800.00
573412	32A Double Pole Switch with Indicator	6A BELL PUSH 1W1M AR		10				₹600.00
573413	6A BELL PUSH 1W1M AR	SOCKET 6A UNIVERSAL INDIA AR		18				₹3000.00
573470	SOCKET 6A UNIVERSAL INDIA AR	6/16A 3PIN SHUTTER SKT 2M AR			12			₹800.00
573471	6/16A 3PIN SHUTTER SKT 2M AR	25A SOCKET 2M AR			22			₹600.00
573466	25A SOCKET 2M AR	FAN CONTROLLER 100W 1M AR			25			₹3000.00
573416	FAN CONTROLLER 100W 1M AR	FAN CONTROLLER 100W 2M AR			26			₹800.00
573426	RJ11 1M WHITE AR	RJ11 1M WHITE AR				18		₹600.00
573427	RJ45 Cat 6 Data Outlet	RJ45 Cat 6 Data Outlet				19		₹3000.00
573425	TV CO-AXIAL SOCKET 1M AR	TV CO-AXIAL SOCKET 1M AR				22		₹800.00
575700	1M SQUARE PLATE+FRAME WHITE	1M SQUARE PLATE+FRAME WHITE				20		₹600.00
575710	PL+FR 2M SQ IND AR	PL+FR 2M SQ IND AR					22	₹3000.00
575720	PL+FR 3M SQ IND AR	PL+FR 3M SQ IND AR					18	₹800.00
575730	PL+FR 4M SQ IND AR	PL+FR 4M SQ IND AR					14	₹600.00
575740	PL+FR 6M SQ IND AR	PL+FR 6M SQ IND AR					12	₹3000.00
689031	PL+FR 8M SQ IND AR	PL+FR 8M SQ IND AR					7	₹800.00
689011	PL+FR 12M SQ IND AR	PL+FR 12M SQ IND AR					5	₹600.00

Print Quote   **Nearest Shops**

Admin Module and Configurations

- **Custom Admin Module to provide relation between Room Type (Bedroom, Kitchen, Living Room, Bathroom, Passage, etc) and Range (Arteor, Myrius, Britzy, etc.)**

- **Admin module also to provide relation between pre-configured options bundle like 1BHK, 2BHK etc. with Room Type**

- **Room type will be defined in DB table named boq_room_types with its association to range options fetched from product_range product attribute as multi-select**

- **Pre-configured options bundle will be defined in DB table named boq_room_bundle**

- **Product Group custom module to list down all the product groups in DB table named boq_product_group along with its associated default QTY per room_type in DB table named boq_product_group_room_qty_link**

boq_product_group	
Id	name
1	GATEWAY
2	6AX SWITCH SP 1W1M AR
3	16A 1 Way Switch

boq_room_types		
Id	name	range_config
1	Bedroom	{12,13,14,15}
2	Living Room	{12,13,14,15}
3	Kitchen	{12,13,14,15}

range_config derived from catalog_product_entity_attribute_option IDs

boq_product_group_room_qty_link		
product_group_id	room_type_id	qty
1	1	10

2	2	6
3	3	14

boq_room_bundle		
Id	name	room_type_config
1	1BHK	{1,2,3}
2	2BHK	{1,1,2,3}
3	3BHK	{1,1,1,2,3}

Product Configuration

- **2 custom product attributes with dropdown type namely product_group and product_range to be assigned to each product**

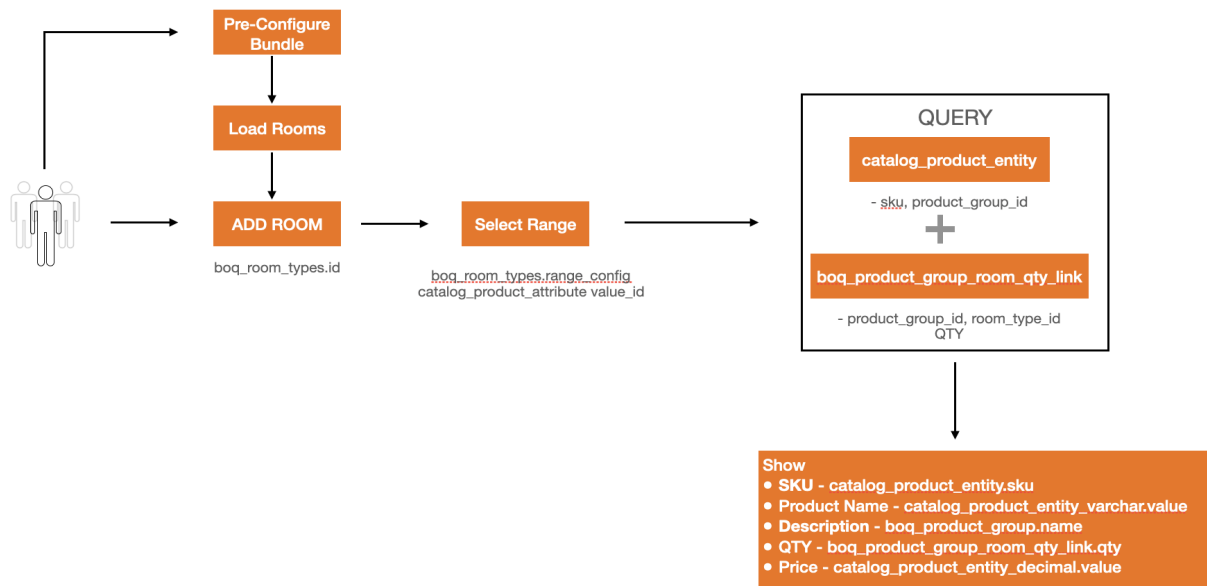- **product_group to have drop-down options fetched from custom module that defined the all-product groups as below**

GATEWAY
6AX SWITCH SP 1W1M AR
6AX SWITCH SP 2W1M AR
16A 1 Way Switch
20A SWITCH SP 1W1M AR
32A Double Pole Switch with Indicator
6A BELL PUSH 1W1M AR
SOCKET 6A UNIVERSAL INDIA AR
6/16A 3PIN SHUTTER SKT 2M AR
25A SOCKET 2M AR
FAN CONTROLLER 100W 1M AR
FAN CONTROLLER 100W 2M AR
RJ11 1M WHITE AR
RJ45 Cat 6 Data Outlet
TV CO-AXIAL SOCKET 1M AR

1M SQUARE PLATE+FRAME WHITE
PL+FR 2M SQ IND AR
PL+FR 3M SQ IND AR
PL+FR 4M SQ IND AR
PL+FR 6M SQ IND AR
PL+FR 8M SQ IND AR
PL+FR 12M SQ IND AR

- **product_range to have drop-down options configured as standard attribute options that could have options as below**

ARTEOR with Automation
ARTEOR without Automation
MYRIUS NEXTGEN
MYRIUS
MYLINC
LYNCUS
BRITZY

Configurator Frontend Flow:

Pre-Configure Bundle

Load Rooms

ADD ROOM
boq_room_types.id

Select Range
boq_room_types.range_config
catalog_product_attribute value_id

QUERY

catalog_product_entity
- sku, product_group_id

+

boq_product_group_room_qty_link
- product_group_id, room_type_id
QTY

Show
• SKU - catalog_product_entity.sku
• Product Name - catalog_product_entity_varchar.value
• Description - boq_product_group.name
• QTY - boq_product_group_room_qty_link.qty
• Price - catalog_product_entity_decimal.value

• On Frontend, user can

- **Click on Bundle like 1BHK, 2BHK etc. that will pre-populate associated rooms on the selection panel. For instance, if user selects 1BHK then selection panel will show 3 blocks with Bedroom, Living Room and Kitchen**

- **Click on any room directly to add a specific room in the selection panel irrespective if Bundle selected**

• Each Room Type Block in selection panel will allow the user to select the associated Range

• Upon selection of Range, custom module will query Magento for its associated products based on product group and product_range. Pre-populate the QTY for each individual SKU/Cat Ref as defined in admin for that specific room

• On click of "Create Quote" with all the selected room_types in selection panel to be consolidated into single table with their associated QTY and price

• On click of "Nearest Shop" a popup to show all available listed shops for the given zip code

• On click of "Print Quote", configurator table to be popped up for print options

Note: Price will be always change with current price of product.

2. Create registration.php & etc/module.xml

3. Create Frontend router

/app/code/Redstage/BoqConfigurator/etc/frontend/routes.xml

4. Create Setup Installation

Create product attribute-

I)- Room type i.e. - Living Room, Bed Room, Bath Room etc.

Ii)-BOQ brand type(product) - i.e.- ARTEOR, MYRIUS NEXTGEN, MYRIUS, MYLINC, LYNCUS, BRITZY, SKIP

Iii)-BOQ product name(subproduct) i.e. - 6AX SWITCH SP 1W1M AR, 6AX SWITCH SP 2W1M AR etc.

Iv)- BOQ qty- set default qty of product

Here we need create all require table-

Tables:

boq_quote

boq_product_group

boq_room_types

boq_product_group_room_qty_link

boq_room_bundle

App/code/Redstage/BoqConfigurator/Setup/InstallSchema.php or db_schema.xml

Table Name: boq_quote

Field Name	Type	Default Value	Comment	Label
id	interger, autoincrement	Auto increment	Primary Key	ID
customer_id	integer (11)	NULL	Customer Id	Customer Id
data	text	NULL	Save quote data in json format	Data
Tittle	varchar(30)	NULL	Quote Title	Title

Status	varchar(30)	NULL	Quote Status	Status
created_at	timestamp	Current_time-stamp	Current date and time	Created At
updated_at	timestamp	Current_time-stamp	Current date and time	Updated At

Table Name: boq_product_group

Field Name	Type	Default Value	Comment	Label
id	interger, au-toincrement	Auto in-crement	Primary Key	ID
name	varchar(100)	NULL	Product Name(Gateway etc)	Name
created_at	timestamp	Current_time-stamp	Current date and time	Created At
updated_at	timestamp	Current_time-stamp	Current date and time	Updated At

Table Name: boq_room_types

Field Name	Type	Default Value	Comment	Label
id	Interger, au-toincrement	Auto in-crement	Primary Key	ID

name	Varchar(100)	NULL	Product Name(Gateway etc)	Name
range_config	text	NULL	Range Config(available rooms)	Range Config
created_at	timestamp	Current_time-stamp	Current date and time	Created At
updated_at	timestamp	Current_time-stamp	Current date and time	Updated At

Table Name: boq_product_group_room_qty_link

Field Name	Type	Default Value	Comment	Label
link_id	interger, au-toincrement	Auto in-crement	Primary Key	ID
product_-group_id	integer (11)	NULL	Product Group Id	Product Group Id
Room_type_id	integer (11)	NULL	Room Type Id	Room Type Id
qty	decimal(20,4)	NULL	Qty	Qty
created_at	timestamp	Current_time-stamp	Current date and time	Created At
updated_at	timestamp	Current_time-stamp	Current date and time	Updated At

Table Name: boq_room_bundle

Field Name	Type	Default Value	Comment	Label
id	interger, autoincrement	Auto increment	Primary Key	ID
name	varchar(100)	NULL	Name	Name
room_type_config	text	NULL	Room Type Config	Room Type Config
created_at	timestamp	Current_timestamp	Current date and time	Created At
updated_at	timestamp	Current_timestamp	Current date and time	Updated At

5. Block

Custom frontend block class Redstage/BoqConfigurator/Block/configurator.php

For Boq history:

Custom frontend block class Redstage/BoqConfigurator/Block/boqhistory.php

6. Create Index Layout

Redstage/BoqConfigurator/view/frontend/layout/boqconfigurator_boq_index.xml

7. Controller

Custom Controller for Boq Configurator page:

Redstage/BoqConfigurator/Controller/Boq/Index.php

Controller for ajax request get rooms combination data base on selected categories, I.e., Home -> Apartment -> 1BHK:

Redstage/BoqConfigurator/Controller/Boq/Roomsdata.php

Controller for ajax request base on products (ARTEOR, MYRIUS NEXTGEN, MYRIUS, MYLINC, LYNCUS, BRITZY, SKIP) etc., show subproduct with qty & price

Redstage/BoqConfigurator/Controller/Boq/Boqdata.php

Controller convert BOQ product to cart:

Redstage/BoqConfigurator/Controller/Boq/Boqtocart.php

Controller for save Boq and send mail to admin:

Redstage/BoqConfigurator/Controller/Boq/Save.php

Controller for edit qty:

Redstage/BoqConfigurator/Controller/Boq/Editqty.php

Admin Controller:

Index Controller (for grid):

Redstage/BoqConfigurator/Controller/Adminhtml/boq/Index.php

Redstage/BoqConfigurator/Controller/Adminhtml/Roomrange/Index.php

Redstage/BoqConfigurator/Controller/Adminhtml/Roombundle/Index.php

Redstage/BoqConfigurator/Controller/Adminhtml/Grouproomqty/Index.php

Edit Contorller:

Redstage/BoqConfigurator/Controller/Adminhtml/Roomrange/Edit.php

Redstage/BoqConfigurator/Controller/Adminhtml/Roombundle/Edit.php

Redstage/BoqConfigurator/Controller/Adminhtml/Grouproomqty/Edit.php

Save controller:

Redstage/BoqConfigurator/Controller/Adminhtml/Roomrange/Save.php

Redstage/BoqConfigurator/Controller/Adminhtml/Roombundle/Save.php

Redstage/BoqConfigurator/Controller/Adminhtml/Grouproomqty/Save.php

Delete controller:

Redstage/BoqConfigurator/Controller/Adminhtml/Roomrange/Delete.php

Redstage/BoqConfigurator/Controller/Adminhtml/Roombundle/Delete.php

Redstage/BoqConfigurator/Controller/Adminhtml/Grouproomqty/Delete.php

8. Create frontend view for Boq Configurator page

Redstage/BoqConfigurator/view/frontend/templates/boqconfigurator.phtml

Show in customer account tab (Here customer edit, delete & Convert Boq product to cart):

Redstage/BoqConfigurator/view/frontend/templates/boqhistory.phtml

Show boq nearest shop data by pincode, we will use store locator to get nearesh shop.

Redstage/BoqConfigurator/view/frontend/templates/boqnearestshop.phtml

Here we will set logic for nearest shop search popup, here enter customer pincode and nearest shop will show in popup -

/view/frontend/requirejs-config.js

/view/frontend/web/js/nearestshoppopup.js

9. Show Boq history on customer tab with link

Here adds tab in account section with action link for BOQ history link, here customer can edit, delete existing BOQ.

Redstage/BoqConfigurator/view/frontend/layout/customer_account.xml

10. Email template create in view

For email template:

/app/code/Redstage/BoqConfigurator/view/frontend/email/redstage_boq_customer_email_template.html

11. email_templates.xml for email setting

/app/code/Redstage/BoqConfigurator/etc/email_templates.xml

12. Create Admin Menu - Here we will add menu in Redstage section, where admin can check configurator quote list.

Also add link here BOQ room & group relation form & grid module.

/app/code/Redstage/BoqConfigurator/etc/adminhtml/menu.xml

13. Ui_component for admin grid

Here call ui component of non amc grid-

/app/code/Redstage/BoqConfigurator/view/adminhtml/layout configuratoradmin_boq_index.xml

Set all fields and resource date in ui_component, admin can check configurator list in admin and filter according to customer name & date.

/app/code/Redstage/BoqConfigurator/view/adminhtml/ui_component/ configuratoradmin_boq_grid.xml

Add all grid list:

/app/code/Redstage/BoqConfigurator/view/adminhtml/layout configuratoradmin_roomrange_index.xml

/app/code/Redstage/BoqConfigurator/view/adminhtml/ui_component/ configuratoradmin_roomrange_-grid.xml

/app/code/Redstage/BoqConfigurator/view/adminhtml/layout configuratoradmin_ roupombundleoomq-ty_index.xml

/app/code/Redstage/BoqConfigurator/view/adminhtml/ui_component/ configuratoradmin_ roombundle_-grid.xml

/app/code/Redstage/BoqConfigurator/view/adminhtml/layout configuratoradmin_grouproomqty_in-dex.xml

/app/code/Redstage/BoqConfigurator/view/adminhtml/ui_component/ configuratoradmin_grouproomq-ty_grid.xml

Range & room type relation

/view/adminhtml/layout/configuratoradmin_roomrange_edit.xml

Here we will show room type & range, range will be multi select and come from product_range attribute.

/view/adminhtml/ui_component/roomrange_form.xml

Room type & bundle relation

/view/adminhtml/layout/configuratoradmin_roombundle_edit.xml

Here we will show room type & bundle (1BHK,2BHK etc), bundle will be multi select and come from product_bundle attribute.

/view/adminhtml/ui_component/roombundle_form.xml

Room & group relationship with qty

/view/adminhtml/layout/configuratoradmin_grouproomqty_edit.xml

Here will be show 3 field -

Room type: dropdown with all room type

Group: dropdown from product_group

Qty: textbox field to add qty

/view/adminhtml/ui_component/grouproomqty_form.xml

14. Create Admin router

/app/code/Redstage/BoqConfigurator/etc/adminhtml/routes.xml

15. Create Model files for resource collection and other DB operations

/app/code/Redstage/BoqConfigurator/Model/Boqquote.php

/app/code/Redstage/BoqConfigurator/Model/ResourceModel/Boqquote.php

/app/code/Redstage/BoqConfigurator/Model/ResourceModel/Boqquote/Collection.php

/app/code/Redstage/BoqConfigurator/Model/BoqProductgroup.php

/app/code/Redstage/BoqConfigurator/Model/ResourceModel/BoqProductgroup.php

/app/code/Redstage/BoqConfigurator/Model/ResourceModel/BoqProductgroup/Collection.php

/app/code/Redstage/BoqConfigurator/Model/BoqRoomtype.php

/app/code/Redstage/BoqConfigurator/Model/ResourceModel/BoqRoomtype.php

/app/code/Redstage/BoqConfigurator/Model/ResourceModel/BoqRoomtype/Collection.php

/app/code/Redstage/BoqConfigurator/Model/BoqGrouproomlink.php

/app/code/Redstage/BoqConfigurator/Model/ResourceModel/BoqGrouproomlink.php

/app/code/Redstage/BoqConfigurator/Model/ResourceModel/BoqGrouproomlink/Collection.php

/app/code/Redstage/BoqConfigurator/Model/BoqRoombundle.php

/app/code/Redstage/BoqConfigurator/Model/ResourceModel/BoqRoombundle.php

/app/code/Redstage/BoqConfigurator/Model/ResourceModel/BoqRoombundle/Collection.php