1. Introduction

The original “Create Product” page in Active E-Commerce has the following sections:

1. Product Information: which contains basic information about the product.
2. Product Images
3. Product Videos
4. Product Variation
5. Product Price + Stock
6. Product Description
7. PDF Specification
8. SEO Meta Tags
9. Product Category
10. Shipping Configuration
11. Low Stock Quantity Warning
12. Stock Visibility State
13. Cash on-Delivery
14. Estimated Shipping Time
15. VAT & Tax

Some of these sections will be removed and some will be modified. In the original page, sections from 9 to 15 are placed on the right side of the page. However, this will be changed such that each section will be below the previous one.

The sections that will be removed are:

- Shipping Configuration: will be injected in other sections.
- Low Stock Quantity Warning: will be injected in another section.
- Cash on-Delivery: not in the current business plan.
- Estimated Shipping Time: will be injected in another section.

The final page sections will be as follows:

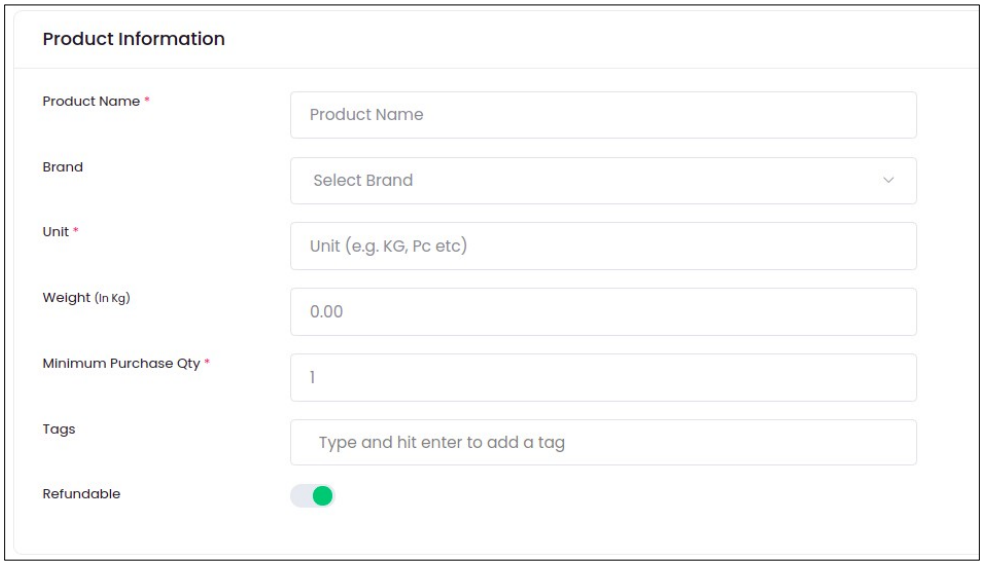
1. Product Information
2. Product Images
3. Product Videos
4. Product Documentation
5. Default Pricing Configuration
6. Default Shipping Configuration
7. Product Category
8. Product Variation
9. General Attributes
10. Product Description
11. SEO Meta Tags

2. Product Page Sections

The details of the page sections will be elaborated as follows.

2.1. Product Information

The current “Product Information” page is shown in the following figure:

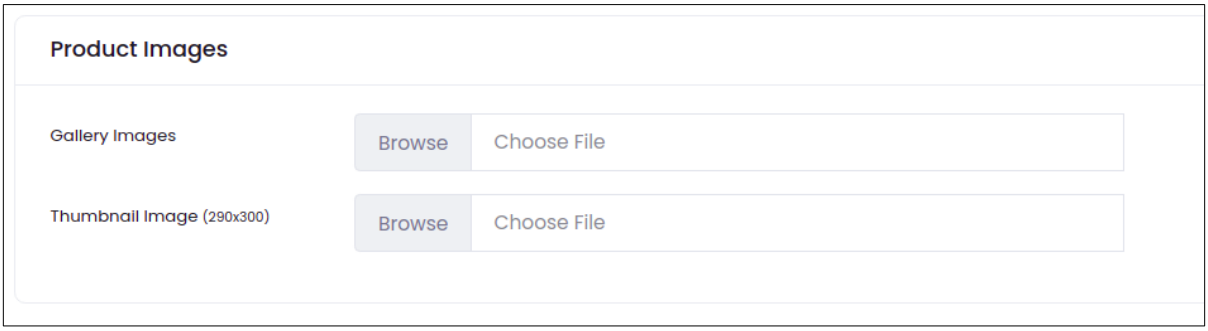


The following changes shall be considered:

1. Change the “Unit” label to “Unit of Sale”.
2. A text-field for “Product Short Description”. Maximum length is 512 characters (English or Arabic).
3. The “Weight” has to be removed since product variants may have different weights. This field can be filled in variants attributes or in general attributes.
4. The “Minimum Purchase Quantity” has to be removed, since it will be included in the pricing tiers.
5. Add a toggle (or a switch) for “Stock Visibility State” and its default value shall be enabled, which means the stock quantity will be visible for buyers. This setting will apply for all product’s variants.
6. A field for “Country of Origin” to be added. It will be a drop-down of all countries.
7. A text-field for “Manufacturer”.

2.2. Product Images

The current “Product Images” page is displayed in the following figure:



The following changes shall be considered for the gallery images:

1. The user must be able to modify the order of the Gallery Images. This indicates the order of images on the product page.
2. The dimensions of each gallery image must not exceed 1280x1280 pixels, and the size must not exceed 2MB.
3. The system must convert each gallery image to jpg with 100% quality.
4. Maximum number of images is 10.

For the thumbnail, the user will be given the option to upload a thumbnail or to leave the system creates the thumbnail from one of the gallery images.

If the user chooses to upload his thumbnail, then the following shall be considered:

1. The minimum dimensions shall be 300x300 pixels.
2. The maximum dimensions shall be 400x400 pixels.
3. The size of the thumbnail must not exceed 512KB.
4. The system must convert each thumbnail image to jpg with 100% quality.

If the user chooses to let the system creates the thumbnail from one of the gallery images, then:

1. The system will create a thumbnail from a gallery image by resizing its dimensions to 300x300 pixels.
2. Then, the system will convert it to jpg with 100% quality.

2.3. Product Videos

The only change here is to restrict the video sources to youtube and vimeo.

2.4. Product Documentation

In the current system, only one document can be uploaded. This has to be changed to more than one file based on the following constraints:

- The file size shall not exceed 15 MB.
- The total size of all files shall not exceed 25 MB.

Note that these two constraints can be re-configured based on the market needs.

The allowed formats of the documents are:

- PDF
- Images (.png, .jpg)
- CAD (.pln, .dwg, .dxf, .gsm, .stl)
- BIM (.rfa, .rvt, .ifc)
- 3ds Max (.3ds, .max, .obj, .fbx)
- SketchUp (.skp)
- RAR
- ZIP

2.5. Default Pricing Configuration

2.5.1. Default Product Pricing

This configuration is optional, but it is useful if two or more product's variants will have the same pricing configuration. It is a default pricing configuration where variants can optionally use. It will help to unify the pricing and discounts for multiple variants with a single setting.

It has the following fields:

- VAT Enabled: default value will be true if the vendor is VAT registered, otherwise false.
- A table for quantity based pricing that has the following columns:
  - From Quantity
  - To Quantity
  - Unit Price (VAT Exclusive)
  - Discount Start Date/Time
  - Discount End Date/Time
  - Discount Type (Flat or Percentage)
  - Discount Amount: enabled if discount type is flat.
  - Discount Percentage: enabled if discount type is percentage.

2.5.2. Default Sample Pricing

This configuration is optional, but it is useful if two or more product's variants will have the same sample pricing configuration. It has the following fields:

- Sample Description
- VAT Enabled: default value will be true if the vendor is VAT registered, otherwise false.
- Sample Price

2.6. Default Shipping Configuration

This configuration is optional, but it is useful if two or more product's variants or samples have the same shipping configuration.

The system has two types of shippers:

1. **Vendor:** the seller performs the shipping by himself.
2. **MawadOnline 3rd-Party Shipper:** which could be any shipping company that has agreement with MawadOnline (Aramex, TFM, etc.)

Since MawadOnline 3rd Party shippers may not serve any area in UAE, the system has to display which vendor's warehouses are serviceable by which shippers. This will be called **Warehouses Shippers Serviceability**:

Warehouse1:
- Aramex
- TFM
- …
- Shipper X
- Shipper Y

Warehouse2:
- TFM
- …
- Shipper X

…

Warehouse N:
- Aramex
- Shipper Y

If all vendor's warehouses are not serviceable by current shippers in the platform, then a suitable message shall be displayed.

2.6.1. Default Product Shipping

This configuration is optional, but it is useful if two or more product's variants will have the same shipping configuration.

If the vendor wants to use MawadOnline 3rd-Party shipping for product shipping, then he has to fill the **3rd Party Shipping Fields**. If all vendor's warehouses are not serviceable by the current 3rd-Party shippers in the system, then these fields will be disabled.

1. Package Dimensions in Centimeters:
   - Length: (2 decimal digits in DB)
   - Width: (2 decimal digits in DB)
   - Height: (2 decimal digits in DB)
2. Package Weight in Kilograms:
   - Weight value: (3 decimal digits in DB)
3. Breakable/Fragile (yes / no)
4. Temperature:
   - Unit (Celsius, Kelvin, Fahrenheit)
   - Min
   - Max

Next to the 3rd Party Shipping Fields, the system has to display the distinct list of 3rd Party Shippers which can serve at least one warehouse. While filling the fields, the system has to show if the shippers can handle the package or not. For example:

Aramex: over-sized cannot be shipped.

TFM: accepted.

Shipper X: over-weight cannot be shipped.

Shipper Y: breakable products cannot be shipped.

Shipper Z: temperature requirements cannot be handled.

The system will use the formulas related to each 3rd Party Shipper configured in the system as below:

Formula for Aramex:

- If the vendor has at least one warehouse that is located in a serviceable area by Aramex, then
  - Calculate Volumetric Weight = (Package Length in cm x Package Width in cm x Package Height in cm) / 5000
  - Calculate Chargeable Weight = max(Volumetric Weight, Package Weight in KG)
  - OK if Chargeable Weight <= 30.

Formula for TFM: TBD

The vendor has to specify the following **Shipping Options** in a tabular form. The fields are described hierarchically to demonstrate the options dependencies. However, in the front-end, they shall be in a table that has drop-down fields:

1. From Quantity
2. To Quantity
3. Shipper (multi-select): at least one should be selected.
   - Vendor
   - MawadOnline 3rd Party Shippers (disabled if all shippers cannot handle the product or all warehouses are in-serviceable areas)
4. Estimated Order Preparation Days.
5. Vendor shipping configuration:
   - Estimated Shipping Days.
   - Paid by (Vendor or Buyer): the following fields will be enabled if Buyer selected:
     - VAT Enabled: default value will be true if the vendor is VAT registered, otherwise false.
     - Shipping Charge Type options:
       - Flat-rate regardless of quantity
       - Charging per Unit of Sale
     - Flat-rate Amount: enabled if flat-rate.
     - Charge per Unit of Sale: enabled if charging is per unit of sale.

Notes:

- Shipping VAT must have a separate configuration from Pricing VAT, since usually VAT on services is different from VAT on goods.
- In the Inventory Management module, when the vendor adds a product to a warehouse, he will be notified if no 3rd Party Shipper will be available for the warehouse. This is a note that has nothing to do with product creation/update as it will be handled in Inventory Management module.

2.6.2. Default Sample Shipping

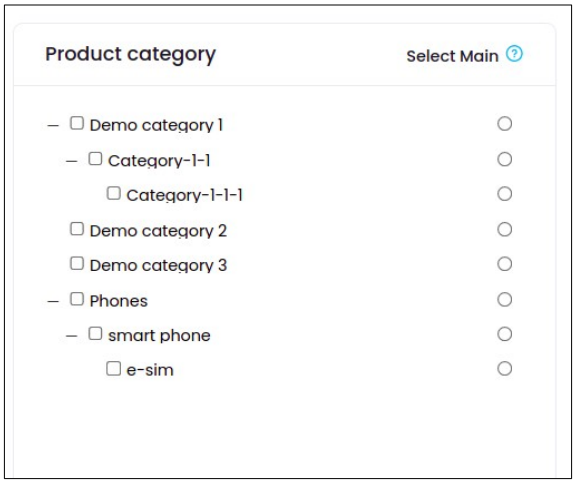
This configuration is optional, but it is useful if two or more product's variants will have the same sample shipping configuration. The **3rd Party Shipping Fields** are also required for the sample. The same logic will be used.

Then, the vendor has to fill the **Shipping Options** which will be in a tabular form:

1. Shipping-by (multi-select):
   - Vendor
   - MawadOnline 3rd Party Shippers (enabled if at least one shipper can handle the product from at least one of the warehouses based on the formulas of 3rd party shippers above)
2. Estimated Sample Preparation Days.
3. Vendor shipping configuration:
   - Estimated Shipping Days.
   - Paid by (Vendor or Buyer): the following fields will be enabled if Buyer selected:
     - VAT Enabled: default value will be true if the vendor is VAT registered, otherwise false.
     - Shipping Amount

2.7. Product Category

In this section, the user will select the category of the product. The current screen allows the user to select more than one category, and specify one main category. However, based on the business requirements, only one leaf category must be selected. A leaf category is a one that has no child categories.



To simplify the change on current screen:

- The tree-nodes approach used on the current screen can be kept the same, because it works irrespective of the number of levels.
- The check boxes on the left shall be removed.
- The label “Select Main” shall be removed.
- The radio buttons on the right must be rendered next to leaves categories only.

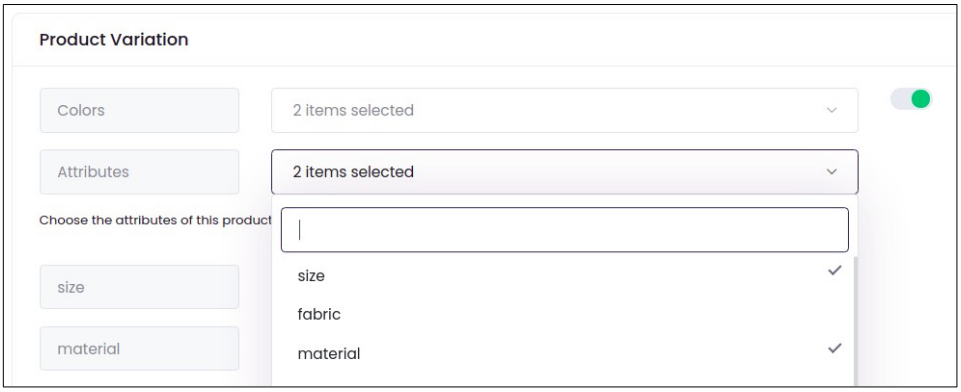
If the developer has a ready frontend widget (or component) that achieves the same requirements, and if it is user-friendly, then it will be reviewed and can be approved.

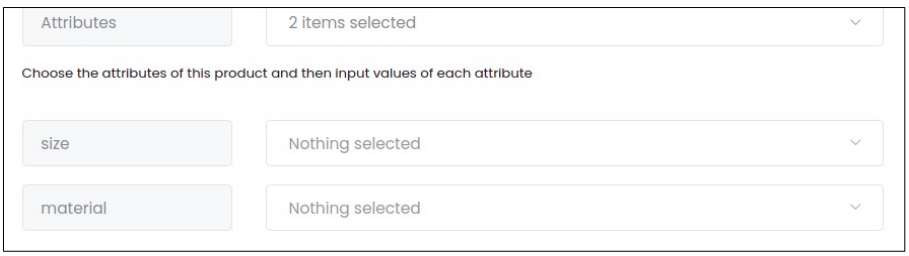
2.8. Product Variation

2.8.1. Current System

In Active E-Commerce, the Product Variation section contains two drop-down lists, one for colors and the other for selecting attributes. Both lists allow multi-select. The color list contains all colors defined in the system. The attributes list contains all the attributes defined in the system.

When selecting an attribute, the system automatically creates a new drop-down list for that attribute which contains all the attributes’ values as defined in the system. This can be demonstrated by the following figures:





In the figure above, the user selected two attributes (size, material). Therefore, the system created two new drop-down lists for size and material.

The attributes' drop-down lists also allow multiple selection. The user can specify which values will be used in product's variations. For example, the user can select two sizes (small, medium) and two materials (copper, plastic).

Taking into account that two colors are already selected (blue, red), This will automatically create eight products variants using a cartesian product of all attributes values:

Variant	Variant Price	SKU	Quantity	Photo
Blue-Small-Copper	100	Blue-Small-Copp	10	Browse Ch...
Blue-Small-Plastic	100	Blue-Small-Plasti	10	Browse Ch...
Blue-Medium-Copper	100	Blue-Medium-Co	10	Browse Ch...
Blue-Medium-Plastic	100	Blue-Medium-Plc	10	Browse Ch...
Red-Small-Copper	100	Red-Small-Copp	10	Browse Ch...
Red-Small-Plastic	100	Red-Small-Plasti	10	Browse Ch...
Red-Medium-Copper	100	Red-Medium-Co	10	Browse Ch...
Red-Medium-Plastic	100	Red-Medium-Pla	10	Browse Ch...

2.8.2. Changes

The methodology of Active E-Commerce cannot be used due to the following reasons:

1. Not all attributes have predefined values. For instance, the value-type could be "Text" or "Numeric".
2. The idea of generating variants by cartesian product may lead to a huge number of variants which may not be physically available. For example, if we had chosen 10 colors, 4 sizes and 2

materials, we would have ended with 80 logical variants that the vendor has to disable, or remove, many of them because they do not actually exist.

Accordingly, the changes on this section will be as follows:

1. The color drop-down will be removed since it is an attribute which shall appear in the Attributes drop-down.
2. The Attributes drop-down will list only the attributes that are inherited or configured on the selected category.
3. When selecting the attributes from the Attributes drop-down, the system will not generate new drop-downs for their values.
4. There will be “Add Variant” button that when clicked, the system will create a sub-section for a new variant. The variant’s sub-section contains the following fields:
    - **Variant SKU**
    - **Variant Photos:** minimum 1 photo, maximum 10 photos.
    - **Variant Attributes:** the fields will be based on the attributes selected for variation. Based on the attribute’s value-type, the field can be:
        - Drop-down list
        - Text-field
        - Color name + Color drop-down list
        - Numeric field + Unit drop-down list
        - Boolean
    - **Variant Pricing:** This must have a switch to use the “Default Product Pricing”. The default will be ON, which means the variant will use the same pricing settings that are configured in the Default Product Pricing section. If the user switches it off, then the same fields used in Default Product Pricing will appear for this variant.
    - **Variant Shipping:** This must have a switch to use the “Default Product Shipping”. The default will be ON, which means the variant will use the same shipping settings that are configured in the Default Product Shipping section. If the user switches it off, then the same fields used for Default Product Shipping will appear for this variant.
    - **Sample Available? (True/False):** this controls whether the following two sections are enabled or disabled.
    - **Variant Sample Pricing:** This must have a switch to use the “Default Sample Pricing”. The default will be ON, which means the variant will use the same pricing settings that are configured in the Default Sample Pricing section. If the user switches it off, then the same fields used in Default Sample Pricing will appear for this variant.

- **Variant Sample Shipping:** This must have a switch to use the “Default Sample Shipping”. The default will be ON, which means the variant will use the same shipping settings that are configured in the Default Sample Shipping section. If the user switches it off, then the same fields used for Default Sample Shipping will appear for this variant.
- **Low-Stock Warning:** This is to notify the vendor if the variant’s quantity is low in stock. This field accepts an integer value of 6 digits. The notification methodology includes the following:
  - Email to vendor.
  - Current notifications that are already available in Active E-Commerce such as login pop-ups, banner, user’s inbox, etc. If available, then they shall be used.
- **Publish/Unpublish Switch:** default will be published.

Notes:

- If one or more variants are already created, and the user clicks the “Add Variant” button, then the system will push down the variants sub-sections, and will create the new one on top.
- If the user decides to create a product’s variants, then he has to add at least two variants.
- The user shall be able to remove a variant, if, and only if, the variant is never used in a transaction.
- A variant can be disabled. If the user disables a variant, then it will not appear in the marketplace. Ongoing transactions will not be affected.

2.9. Product General Attributes

This section will be a new one. Based on the selected category, the system will show all the attributes that shall be applicable for the product, except:

1. The following attributes which are already entered in the Product Information section:
   - Brand
   - Unit of Sale
   - Country of Origin
   - Manufacturer
2. The variation attributes specified in the Product Variation section.

Additionally, the following fields will be enabled if no product variants created, otherwise they will be disabled:

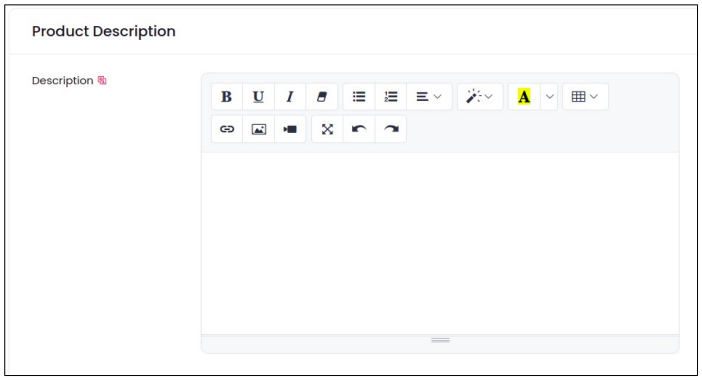
1. Product SKU
2. Low-Stock Warning (same as in product variants)

Notes:

- If the user creates a product without a variant, then he decides to create a variant, then the system shall create two variants sub-sections. The last one, on top, will be the new variant to be added. The first one automatically inherits the product details (SKU, Product's Photos, General Attributes, Default Pricing, Default Shipping, Low-Stock Warning). This has to be implemented in a user-friendly way. For example, a modal popup that explains what will happen, before creating the variants sub-sections, might be a good approach.

2.10. Product Description

This is the same "Product Description" section that already exists in Active E-Commerce. The only change here is to restrict the size to 16 MB.



2.11. SEO Meta Tags

No changes are proposed on this section.

3. Product Preview

There must be a static button on the top bar that when clicked it opens the product's page on another browser's tab. This will help the vendor to see how things will look like on the marketplace before saving them.

This feature will be applicable when creating a new product or updating an existing product. In case of updating a product, the user (the vendor) must be able to view the changes on the product's page before publishing them to the marketplace.

4. Draft Saving

Since the vendor needs to collect lots of information about a product, he will be able to save a product as a draft.

When a product is saved as a draft, it will appear on vendor's product listing, so that he can open it to continue the data entry.

5. Product Approval

Once the product is created or updated by a vendor, it can go through the following statuses:

- Pending for Approval: the vendor can still modify/edit the product, and the last version will be pending for admin approval.
  - New products cannot be shown on the marketplace unless they are approved.
  - In case the approval is for product update, the changes and additions will not be applied on the product unless they are approved. Once the vendor saves the changes, the system will prompt the vendor to confirm whether he wants to keep the last approved product published on the marketplace or it shall be turned to unpublished. If published, buyers on the marketplace will see the last approved version.
- Under Review: The admin sets the product on this status to review the last version of the product submitted by the vendor. The vendor cannot edit or modify the product at this status.
  - In case of a new product, the admin will review all the fields of the product.
  - In case of a product update, all the updates after the last approval will be highlighted for the admin such that:
    - A special color will be used on the borders of added fields.
    - Another special color will be used on the borders of modified fields.
    - When hovering over a modified field, the last approved value will appear as a tooltip. Note that a field can be a table cell, text-field, drop-down, etc.
- Revision Required: the product creation (or update) is not approved by the admin, and returned to the vendor for applying certain corrections. The required corrections are specified by the admin.
- Rejected: the product creation (or update) is rejected. The admin has to enter the rejection reason.
  - If the rejection is for a new product, then the product will be archived as a rejected product. The vendor cannot further modify the product.

- If the rejection is for a product update, then the update will not be applied on the product, but will be saved in the database as historical information.

- Approved: the product creation or its update is approved. It will be visible in the marketplace, if the product is published.

Notes:

- In all statuses, the admin cannot modify the product.
- In all statuses, the vendor will be able to see:
  - The current status.
  - The required corrections, if revision-required.
  - The rejection reason, if rejected.
- The vendor will receive emails with status change.
  - The email will contain the required corrections, if the status is revision-required.
  - The email will contain the rejection reason, if the status is rejected.
- All modified fields require admin approval, except the followings:
  - Default Pricing Configuration
  - Variant Pricing
  - Product SKU
  - Variant SKU
  - Product Low-Stock Warning
  - Variant Low-Stock Warning
  - Publishing/unpublishing a product
  - Publishing/unpublishing a variant

6. Product Publishing

When the vendor saves a new product, the system will show him two consecutive pop-ups:

1. First pop-up informs the user that the product will be pending for approval and that he can make the product publishing “On” so that it becomes automatically available on the marketplace once approved by the admin. If he chooses “Yes”, the product publishing will be “On”, but its visibility on the marketplace will be waiting for admin’s approval.
2. Second pop-up prompts the user to create stock items for the product. If the vendor chooses “Yes”, then he will be forwarded to the inventory management page for creating the stock.

This gives freedom for the vendor to decide what action he wants to follow. The response of the vendor for these consecutive popups can lead to one of the following probabilities:

1. The product is unpublished and does not have stock. The vendor will do the required actions later.
2. The product is unpublished, but has stock. The vendor wants to make it published later for any commercial reason.
3. The product is published and has stock. Its visibility on the marketplace will be awaiting admin's approval.
4. The product is published and has no stock. In this case, it will appear on the marketplace with stock unavailable, which might be commercially acceptable by the vendor for a short time.

At any point of time, if the vendor tries to publish an unpublished product, the system will check the stock status of the product. If it has no stock, then the system will show a Yes/No popup for the user to confirm his action. "Yes" to make it published, and "No" to keep it unpublished.

Notes:

- The admin can disable/enable a product at any point of time.
- Disabling a product by an admin or unpublishing by a vendor will not affect ongoing transactions.