00:07 Ajit Singh: so, you tomorrow,

00:15 Rakesh Padamshali: Made it an email.

00:29 Shwetank Upadhyaya: Hey guys. I've been

00:33 satya geekyworks: Hi Shwetank, how are you?

00:34 Shwetank Upadhyaya: Yeah, Hope I'm good. How are you doing?

00:38 satya geekyworks: I'm also doing fine.

00:39 Ajit Singh: But then,

00:40 satya geekyworks: Hello, Ajit. Good afternoon.

00:41 Ajit Singh: I I grew up and Rakesh is there on this call? Hannah hame. What we need to do, like we discuss that. And we want to do a short poc.

00:50 Rakesh Padamshali: Yeah, because

00:51 Ajit Singh: We want to develop a full budget. Am I like we discuss many things we discussed? Yeah, you know, AI for analytics. You know, all that and that will be going to be just going to be a big part later on. But as of now, fundamental part, actually, you know, standardizing our coding practice,

01:10 satya geekyworks: Okay.

01:11 Ajit Singh: And maximizing the use of AI wherever we can. So that, you know, the code quality becomes better more maintainable. And faster, develop cleaner code understood by everybody. So if I make, when I had rakesh's made some, you know, not empty falconic as a kid, you just, you know, I'll step out, but you discuss with explain what we have in towards the end of

01:36 Rakesh Padamshali: Yeah, so I'm sharing my screen Satya.

01:38 Ajit Singh: I expect when I was equally then we'll create MD, parallel water with suggest. You know, let's try and create one app. When it puts a small app to show the

01:45 satya geekyworks: whole workflow on this, And let's see how far we can get. What is there? A Minuteman doesn't have to be fully accurate, you can have gaps and you can have one more iteration later on Okay.

01:55 Ajit Singh: because we have our logic is that we have got great clarity on functionally. How exactly things should work. So we are good in design. We need to translate that to same capability level in coding, in that better properly. Yes, comment. And maybe we'll connect once

your getting closer to the end of this call, and we'll decide the next step and We go over to Rakesh and you said, Yeah.

00:00 :

02:45 Rakesh Padamshali: So is my screen visible.

02:54 satya geekyworks: This is a second. I'm also logging in from laptop just

03:00 Rakesh Padamshali: Okay.

03:15 Satyendra: Hello.

03:17 Rakesh Padamshali: Yes.

03:18 Satyendra: Yes, I am audible now, right?

03:21 Rakesh Padamshali: Yeah. Yeah.

03:22 Satyendra: Yes, Rakesh I can see your your desktop.

03:26 Rakesh Padamshali: Okay. So this is the document respect document, which have prepared for this particular problem. So where we need to create production confirmation UI, For MEs application. Okay.

03:43 Satyendra: Okay.

03:45 Rakesh Padamshali: So, I will take you through this document. And if you have any question, then you can ask So, there are different stages when we are doing production. We can say stages or process, both are same.

04:03 Satyendra: Yes.

04:04 Rakesh Padamshali: And each process, each intermediate, or finish good with the and stage of every process, okay. Every process each process will have multiple operation. Through which that material will flow. And at each operation, we need to Capture the production details or production, conformation. Okay. Yes. Then there are some inputs required user need to select some input.

04:41 Rakesh Padamshali: So one is the order information because what our product is happening is against some order. order is the starting point here, so just for this one one single order or order ID, can I have multiple line items multiple line atoms and multiple products, each product can have different Excuse different quantities.

05:15 Rakesh Padamshali: Okay, so generally it will have product information or SQL information,

05:17 Satyendra: Right.

05:23 Rakesh Padamshali: quantity. And diluted. This is a basic information. Additionally, there could be more details to it like customer and any add to good or any UM, parameters related to that particular product.

05:42 Satyendra: Right. so production confirmation will happen for each line, atom separately, because each line atom will produce separately so that production confirmation will happen but in some cases like whenever we are doing batch operation So batch operation can have multiple orders conformation at once. Okay.

06:11 Rakesh Padamshali: Okay. And another input. We need the materials or the raw materials or intermediate materials which we which required for that particular production. So this the this will be the another input. Yeah, so one batch if it is a batch operation one batch can have multiple order or one order can be distributed in multiple batches.

06:45 Rakesh Padamshali: Based on that order quantity. Okay. Then particular material or production will flow in one particular process sequence. Okay, this process requires. We generally are derived using the bill of material.

07:05 Satyendra: Hmm.

07:09 Rakesh Padamshali: And this will of material are generally multi-level. So each level is basically and of each level, we are getting one. When intermediate or one FG produce. So this each level will have one process attached to it. Okay. if I will show that bomb is created so that you can relate Then this is the operational sequence.

07:41 Rakesh Padamshali: So, within a process, there could be multiple operations sequence. And each operation sequence, we need to capture the Production information. So this operations are derived from the routing. So we

07:47 Satyendra: No.

07:50 Rakesh Padamshali: will have this routing information which will give us the operations sequence. Okay. And we need to capture the production for each operation and the next operation will set automatically based on the routing.

08:11 Satyendra: Okay.

08:14 Rakesh Padamshali: Then each operation can now have multiple equipment. so in which equipment or machine this particular production is happening, That we need to capture. Additionally. So because this equipment is a physical entity, whereas operation process. All these are basically logical, logical, entity, logical objects to group this kind of equipment or that production stages.

08:45 Rakesh Padamshali: Okay. All this production confirmation will happen against particular equipment or set of equipment in some cases.

08:56 Satyendra: No.

08:57 Rakesh Padamshali: Okay, so one operation can have multiple equipments generally operation will or equipment type. We will have. I either batch equipment or continuous equipment batch, in case of batch equipment, there will be fixed time. Say two hours which will require to complete the particular match. Or in case of continuous, it is a continuous production.

09:19 Rakesh Padamshali: So user will mostly input number of quantities produced in a say one hour so that will be the depend upon the speed of that equipment. So user will just input start time and time and the total quantity.

09:36 Satyendra: Hmm.

09:38 Rakesh Padamshali: Okay. These are just for the equipment. Users means particular equipment is in use, or is assigned to some order notes. So this is just the information. We need this. Maybe we need this fortressibility equipment for reporting and the capacity for future capacity planning. So particular equipment is occupied for how many period, how many days? Is this particular equipment is in use or not.

10:09 Rakesh Padamshali: So all this data will be captured through that production confirmation. So this information will be the you know, my product of that capturing data.

10:22 Satyendra: Okay.

10:29 Rakesh Padamshali: Then this production confirmation, it is, as I mentioned, we need to capture this production confirmation at each operation. And mostly we need to capture that this this basic at least standard information. How many quantity produced any scrap or you'll generated start time and time of the production equipments use operator name.

10:56 Rakesh Padamshali: If and any delay in production we need to capture that delay reason basically

11:05 Satyendra: Right.

11:06 Rakesh Padamshali: And what are the robertel and intermediates are consuming at that particular production. So this will this will the input along with the order. And this is the basically main thing, which we need to capture, and this process parameter will be mostly dynamic. Based on operation, this process parameter can change.

11:32 Rakesh Padamshali: Like for operation one, there could be different set of parameters. And for operation to there can be different set of parameters. So against each operation and based on that particular order or product, and this process parameter will be dynamic. So some

of your example are like, energy consumption or Alconiums and any consumable which are consuming during this process.

12:03 Rakesh Padamshali: Or let's say temperature what was the temperature for that production. So this could be Some of the process parameter and this this are basically not fixed. And this will come dynamically based on order operation or product combination.

12:25 Satyendra: Right.

12:26 Rakesh Padamshali: Okay. Then we need to maintain some status like production status. This particular operation is it is ready or it is in program process. It is completed or parsley completed or it is on hold. So if you it is on hold, We are capturing this whole reason. Delayed delaysia and hold result.

12:54 Rakesh Padamshali: So

12:55 Satyendra: Hmm.

12:56 Rakesh Padamshali: Hold reason. Could also be, you know, different And there can be different reasons for holding that particular production. So, this is the operation status process status. Almost mostly. All this is related to that material. Or that input, what we are giving to giving for production and with the equipment

13:22 Satyendra: Sorry.

13:23 Rakesh Padamshali: okay, so if you see, if we say process status, Process is ready or process as in progress process is completed, or that particular process is rejected. So, whenever we are seeing process is detected our process on hold.

13:40 Satyendra: Hmm.

13:41 Rakesh Padamshali: That material will not flow again and flow to the next operation or the next process. So on this validation will be there. And then order line status. So it is order line production is in progress or incomplete in progress when it is in between operation or is in in between process.

14:05 Rakesh Padamshali: Completed means all the operations are completed and it reads the end operation. It is blocked due to some reason or it is particular, order line is on hold.

14:20 Satyendra: Hmm.

14:21 Rakesh Padamshali: So and this will be the holder is an due to operation. Equipment breakdown quality, inspection material, shortage operator and well between this is some example. So we'll have you can have list of our old reason where the user can select this.

14:44 Satyendra: oh,

14:48 Rakesh Padamshali: Then similar to process operation order status, there could be, you know, different inventories available and there will be status. We need to maintain the maintain for the inventory like inventories of for the next top person. It is also this will this will be the input. While this consumed. Whenever we are consuming some inventory, we need to maintain which inventory are consumed? That which stage, or which operation, which equipment Inventory is also produce like after each operation.

15:26 Rakesh Padamshali: Material is changing the form. Okay, so one, one material. We are consuming another. We are producing. So we are producing the inventory. Also, we are consuming the adventure, also, So, we need to maintain the status of that inventory. And when to generate the new new inventory record also, To save in the table that new record will process in the next operation.

15:57 Rakesh Padamshali: So for each operation, there will be changes in the inventory status and so where it will consume somewhere somewhere. It will produce somewhere. Some in some operation, it will just change the form entries, same or the number is same or that inventory ID. Your best number is same, but form is changed, okay?

16:27 Satyendra: Okay.

16:30 Rakesh Padamshali: So this is just inventory, movement rule. So inventory movement, this after each operation that inventory is changing or inventories. Moving to the next operation, their consuming inventory at previous operation producing inventory. At current operation The inventory for next process is blocked until the user. So after each state, there is a separate workflow involved as of now, we can ignore this unity season because quality tax and all this is required.

17:02 Rakesh Padamshali: It is still. So, as of now, will not consider this. And if an inventory is on hold, we can capture that information also.

17:14 Satyendra: Okay. No.

17:18 Rakesh Padamshali: So, Multirole bomb requirement is mostly like, you know, we need to calculate the requirement at each level. So there will be ratio yield loss or ratio at the beloved material level, which will use to, you know, generate the initial requirement. So, so because we need to put one quantity.

00:00 :

17:36 Satyendra: No.

17:39 Rakesh Padamshali: As as nfg. So Producing that one quantity will require more than one, so that because in during that moment multiple stages, there will be losses or there will be scrapped generated. Okay, all this information will be available in bill of metal, in terms of

17:55 Satyendra: Hmm.

18:00 Rakesh Padamshali: ratio.

18:01 Satyendra: Okay.

18:03 Rakesh Padamshali: So based on there, so we will calculate the next stage requirement. Mostly user will in enter that information but somewhere we need to, you know, three populate so that into the user is minimal. In that case, this bill of material calculation will be required. And this will be the final confirmation UI where we need to capture.

18:32 Rakesh Padamshali: All these details, there will be available order list. Which we need to solve. There will be available raw material list which will need to so and based on this availability user will select this order. Yeah, order and Raw Motel Intermitted a list, user can select multiple raw material and intermediate and the consumption quantity, that consumption quantity will come from the bill of material.

19:04 Rakesh Padamshali: And then we need to capture the details of a production like start time and time quantity, produce equipment. Operator. all this information, which are There in this point. Six, This we need to capture. Then. Whenever we are getting the quantity as an input, there will be one configuration required based on the, you know, based on the data.

19:33 Rakesh Padamshali: So either quantity could be in decimal or integer. If corruption is happening in pieces and quantity will be integer. Otherwise, like product sign is happening in KG or later then. Quantity can be decimal also. Okay. This configuration will require mostly, it will be at the unit unit level. Or.

19:58 Rakesh Padamshali: Equipment. Machine material, level, or operation, level or equipment. So we need to configure this

20:08 Satyendra: Nope.

20:09 Rakesh Padamshali: And then batch or not specifications with whatever production is happening. It can happen in some batches or some lots. So, whatever batch or lot is generating. We need to maintain the Are we to generate the number for each each batch or each lot so that we can track that material from my start to end.

20:37 Rakesh Padamshali: What is the input source for that material for particular batch of particular lot and from which different operations that better flows? Okay. So, we need to have this bad generation logic or bad generation. Piece of code, where it will generate based on configuration. So it could be you know we can generate.

21:03 Rakesh Padamshali: We can add some prefix at each batch or lot number. You can include date format or it can be any sequence or any third. third party or basically, external logic, can also be there to generate the batch number And this is like one bad one to one batch means one operation.

21:30 Rakesh Padamshali: Will produce one batch and it will same batch will go to the next operation or we can have one badge splitting in two multiple batch at next operation. Or it is also like we are merging multiple batch in one operation and we are providing single best to the next operation and many to many matches up.

21:58 Rakesh Padamshali: So based on that UI should be. I allowed user to, you know, Add multiple production information, multiple line. So mostly we need to capture these parent batch child badge. What is the quantity of that batch at which operation? That match is created. It displayed batch autism March batch. All this information.

22:24 Rakesh Padamshali: We need to capture this is some relationship information but we need to capture more details. And yeah so order will be there against each batch or each lot whatever production is happening is against some order or multiple order. So all this information will be there with each batch or each lot.

22:51 Rakesh Padamshali: And this is a kind of, Audit audit trail, kind of thing where we need to know. In case of any change in values, we need to capture the previous old. all new values users or basically working on this particular data, changing that data or Entering that conformation data and the timestamp.

23:17 Rakesh Padamshali: okay, so these are the mostly Requirement capture in this specification. Apart from this, I will add. Mostly What are the tables and your diagram required? I will attach that also Okay.

23:34 Satyendra: Okay.

23:37 Rakesh Padamshali: so, Yeah, so we need to mostly, you know, there will be this particular one. This UI which will act as a Data. Capturing, for all this, whatever we discussed, you need to capture all the information in multiple tables in output. In this UI.

24:03 Satyendra: All right. Okay.

24:07 Rakesh Padamshali: Yeah. So Is it clear? You know, any question then?

24:17 Satyendra: Let's clear. What I will do is I will go through it, create a logical flow.

24:21 Rakesh Padamshali: Yes, yes.

24:22 Satyendra: Okay, and then I will be having questions on the logical flow. I mean, in terms of requirements, I think it is fine. Okay.

24:31 Rakesh Padamshali: Okay, okay.

24:32 Satyendra: I have no questions on the requirement. It's just that the logical flow enviability will. Prompt any questions then? Yeah.

24:39 Rakesh Padamshali: Yes. Okay. So many time, I will, you know, add table details and AI. And I gram also. And so that bomb a lot of metal detox. You, you know,

24:57 Satyendra: What?

25:00 Rakesh Padamshali: material Mostly if you see this particular bill of material, so this is a multi-level block metal, okay?

25:09 Satyendra: Okay.

25:12 Rakesh Padamshali: Is bill of material or each, You know, this, this is the product name, or item name or sq name. What we say, This is the SQ name and this is a different code. I am one, I am three, I am too easy, some product code or I am code.

25:29 Rakesh Padamshali: Okay, so this is the last level still V d. Still non video. This is the last level. And this is, this will be the first process in our case. This will be a second process. Third process for fifth sixth, after this, 6 process or six stage will get the final product.

00:00 :

25:51 Satyendra: No.

25:52 Rakesh Padamshali: okay, and this is the ratio at each process, if you see By scientist. This is the one is to 1 ratio here. So 1.0, It means this point 0 8 For producing one quantity, I will need 1.08 turn off this particular slab.

26:13 Satyendra: Hmm.

26:14 Rakesh Padamshali: A producing this slab will lead. 1.02 are turn off this steel video normally. So these are the ratio. And this is a mostly one is two one six because at lowest level will require multiple raw address to produce this molten metal. You can see which will finally go to the caster rolling machine.

26:39 Rakesh Padamshali: And tempering.

26:41 Satyendra: No.

26:44 Rakesh Padamshali: This, this is a basically lost data, which will happen at each stages. So that's why it is mentioning bill of material. Okay? And so that's through the routing thing also,

26:57 Satyendra: Hmm.

27:02 Rakesh Padamshali: At notes single daytime this, but there will be this is a one process and one process can have multiple operation. And particular product will have one routing idea test to that. And based on the routing, this operation will follow one is to us one by one. First option, the next, and next until the last operation, after last last operation will get this particular

material, if it is defined, and this will be the end of process one, then it will go to the next next process.

27:38 Rakesh Padamshali: Then again, for the next person, there can be different routing involved. Okay.

27:45 Satyendra: Okay, no, I think I will go through this map it there, right? Yes, I need to go

27:46 Rakesh Padamshali: No. Okay, so Any any other question from your side? Okay.

28:06 Satyendra: through this once myself.

28:11 Rakesh Padamshali: Okay, sure.

28:12 Satyendra: Yes. You need this? As a single dashboard, right? Single

28:24 Rakesh Padamshali: Yeah, so right now for PC we are casting as this stand alone. You know, application we are we'll have some data already present in tables and

28:34 Satyendra: Right.

28:35 Rakesh Padamshali: Based on that, this UI will work and it will capture all the information required. So all the backend and front-end part where respecting generating through we are trying to generate through the AI.

28:52 Satyendra: Right. Okay.

28:53 Rakesh Padamshali: So, it will be like, well, it will be standalone thing because we are just considering this as a poc.

29:03 Satyendra: Fine. Fine. You would attach this document and send override.

29:08 Rakesh Padamshali: Yes, yes, I will attach. I will add this table. Details table and formation and You are diagram also and I will share it across.

29:19 Satyendra: Okay, okay. Sounds good. Sounds good.

29:24 Rakesh Padamshali: Okay. So Ajit. I, I shwetank

29:44 Satyendra: Hello. so,

29:46 Shwetank Upadhyaya: Yes, I did.

29:48 Rakesh Padamshali: No. So I explained this the flow to Satya and

29:51 Shwetank Upadhyaya: Yeah. TK.

29:53 Rakesh Padamshali: Satyendra, will you work on this document? And then we'll come with

29:56 Shwetank Upadhyaya: Note.

30:02 Satyendra: Huh. so Rakesh will send me this document with some table structure and some

30:04 Shwetank Upadhyaya: Yeah.

30:10 Satyendra: More information on that, I will go through that, you know, just try to create my own logical flow, right?

30:17 Shwetank Upadhyaya: Okay.

30:18 Satyendra: Yes. And in the while doing that I will be having you questions. I will post those questions, right? I will send that to you.

30:24 Shwetank Upadhyaya: Sure.

30:25 Satyendra: Yes.

30:26 Rakesh Padamshali: Yes. So you can connect with me whenever you are required.

30:30 Satyendra: Sure.

30:32 Shwetank Upadhyaya: Okay, that's okay. Thank you.

30:35 Satyendra: Yes. Thank you.

30:39 Rakesh Padamshali: Anyway.

BM<>Satyendra : AI discussion

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Action Items

Satyendra to review document and create logical flow for production confirmation UI 24:18

Rakesh to send production confirmation UI document with table structure and ER diagram 29:04

Satyendra to post questions on logical flow to Rakesh after review 30:18

Production Confirmation UI Requirements

Production confirmation UI needed for MES application to capture details at each operation 03:35

UI must capture order information, raw materials, and intermediate materials as inputs 04:34

System requires capturing production quantity, scrap, start/end time, equipment, and operator details 10:46

Dynamic process parameters must be captured based on operation, product, and order combination 11:43

Production status tracking includes ready, in-progress, completed, partially completed, and on-hold states 12:33

Order line status must track in-progress, completed, blocked, and on-hold states with hold reasons 13:54

Inventory movement rules require tracking consumption and production at each operation 16:33

Batch/lot number generation logic needed with configurable prefix, date format, or sequence options 20:55

Audit trail required to capture previous values, new values, user, and timestamp for changes 22:58

Technical Specifications

Each process can have multiple operations derived from routing information 07:41

One operation can have multiple equipment types: batch equipment with fixed time or continuous equipment 09:04

Bill of material is multi-level with ratio and yield loss at each level for requirement calculation 17:25

Quantity configuration required to support both decimal and integer values based on unit 19:34

Batch relationships support one-to-one, splitting, merging, and many-to-many batch operations 21:30

Production confirmation UI will be standalone POC application with pre-populated data in tables 28:53

Project Approach

Team discussing short POC and full budget development for AI implementation in coding practices 00:47

Focus on standardizing coding practices and maximizing AI use for better code quality 01:03

Team has clarity on functional design and needs to translate it to coding capability level 01:55