

CLASS 5
Sprint 4
Technical Requirements

- Sprint 3 PBIs updated descriptions, and test scenarios
- Sprint 4 PBIs descriptions, updated and new attributes, test data, and test cases (test cases are not yet released)
- Exam schedule

Product Backlog

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1	VIEW-TASK-TABLE VIEW	1
2	VIEW-TASK-DETAIL	
3	ADD-TASK-BASIC	2
4	DELETE-TASK	
5	EDIT-TASK-BASIC	
6	ADD-STATUS	3
7	EDIT-STATUS	
8	DELETE-STATUS	
9	NESTED-PUBLIC-PATH	
10	SORT-TASK-BY-STATUS-TABLE-VIEW	4
11	FILTER-TASK-BY-STATUS-TABLE-VIEW	
12	LIMIT-TASKS-IN-STATUS	
13	VALIDATE-INPUT-FE-BASIC	
14	VALIDATE-INPUT-BE-BASIC	

- Release-Level Priority
- The priority is modified to accommodate for the level of difficulties of each PBI

- Must-have
- Should-have
- Could-have

- in-complete tasks from previous Sprint may be carried forward to current Sprint backlog
- (at the beginning of the Sprint) commit PBI (Sprint goal) to advisor
- share what the team have learned on this Sprint Spike
- development of committed PBI in Sprint backlog
[each PBI should be broken down to tasks such as create DB schema, create entity class, create controller, test endpoint with postman, deploy on server, ...]
- review and UAT **completed** PBI with advisor
- next Sprint Spike

status Attributes : v1 [PBI6–]

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Attribute Name	Description / Constraints	Example
statusName	Status name : UTF-8 TEXT; Limit to 50 characters; NOT NULL; NOT EMPTY; UNIQUE Leading and trailing whitespaces are trimmed;	To Do
statusDescription	Status description : UTF-8 TEXT; Limit to 200 characters; OPTIONAL; NOT EMPTY; Leading and trailing whitespaces are trimmed;	This item hasn't been started

task Attributes : v2 [PBI6–]

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Attribute Name	Description / Constraints	Example
taskTitle	Task name : UTF-8 TEXT; Limit to 100 characters; NOT NULL; NOT EMPTY; Leading and trailing whitespaces are trimmed;	design API specs for PBI1–2
taskDescription	Task description : UTF-8 TEXT; Limit to 500 characters; OPTIONAL; NOT EMPTY; Leading and trailing whitespaces are trimmed;	need to specify endpoints, request body, response body, status
taskAssignees	Task assignees : UTF-8 TEXT; Limit to 30 characters; OPTIONAL; NOT EMPTY; Leading and trailing whitespaces are trimmed.	Pang; Pong;
taskStatus	Task status : applicable statuses are stored in status table; NOT NULL; The default value is 'No Status';	To Review
createdOn	Task creation date/time (on DBMS) : DATETIME; NOT NULL;	2024-04-19 01:00:00
updatedOn	Task last update date/time (on DBMS) : DATETIME; When a task is created, updatedOn is the same as createdOn; NOT NULL;	2024-04-20 18:00:00

PBI6 Descriptions

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PBI #	PBI NAME	PBI DESCRIPTION / CONDITIONS
6	ADD-STATUS	<ol style="list-style-type: none">When the user clicks on “Manage Status” menu, the Status table listing existing statuses is shown with statusName and statusDescription.<ol style="list-style-type: none">If statusDescription is NULL, the statement '<i>No description provided</i>' is shown in <i>italic</i> and grey.User has choice to Add, Edit, or Delete Status. The “No Status” status cannot be edited or deleted.When “Add” is clicked, a modal window to add a new status is shown, with options to “Save” or “Cancel”. "Save" is enabled only if the statusName is NOT empty.User enter status Name [Required] and Description [Optional] . The statusName is 'NOT NULL', 'NOT EMPTY', 'UNIQUE' (uniqueness is NOT tested in this PBI). The statusDescription is 'NULLABLE' and 'NOT EMPTY'.<ol style="list-style-type: none">FE does NOT trim any field while the user enters the data on these fields. FE must trim status details before sending to BE.If the user does not specify status description (it is EMPTY), FE sends 'NULL' to BE.When user click "Save", FE sends request to BE<ol style="list-style-type: none">BE must trim statusName and statusDescription before inserting to DB.On success, BE returns 201, FE shows a message "The status has been added" and then returns the previous page to show the updated Status TableOn failure, BE returns 400 or 500, FE shows a message "An error has occurred, the status could not be added." and then returns the previous page. The Status Table is unchanged.

PBI6 Test Scenarios

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PBI	TEST ID	Test Scenario	Expected Results
6	TC-PBI6-ADD-STATUS-1	normal – no statusName and cancel	1. “Save” button is disable 2. FE does not send request to BE and returns to previous page
	TC-PBI6-ADD-STATUS-2	normal – no description	1. FE sends description=null to BE 2. New status is created successfully with status code 201 3. FE shows name and description field (" <i>No description is provided</i> ") correctly
	TC-PBI6-ADD-STATUS-3	normal – all field with max size	1. New status is created successfully with every character stored in the database
	TC-PBI6-ADD-STATUS-4	normal – all field with leading and trailing whitespace	1. New status is created successfully 2. FE has trimmed leading and trailing whitespace 3. BE also trim leading and trailing whitespace (if exist)
	TC-PBI6-ADD-STATUS-5	normal – add tasks with new statuses (1 No Status; 2 Waiting)	1. Three tasks are created successfully with 1 No Status task and 2 Waiting tasks

PBI7 Descriptions

PBI #	PBI NAME	PBI DESCRIPTION / CONDITIONS
7	EDIT-STATUS	<p>1. When the user clicks on "Edit" button for a Status, the Edit-Status modal window is shown and all fields are editable, with options to "Save" or "Cancel"</p> <ul style="list-style-type: none">1.1 the "No Status" status cannot be edited1.2 "Save" is enabled only if the form is modified by the user and status name is not empty1.3 FE does NOT trim any field while the user enters the data on these fields. FE must trim status details before sending to BE.1.4 If the user does not specify status description (statusDescription is EMPTY), FE sends 'NULL' to BE.1.5 BE must trim statusName and statusDescription before updating DB. <p>2. On "Save", FE sends request to BE. On "Cancel", no request is made to BE, FE then returns to previous page.</p> <p>3. On successful update, FE shows "The status has been updated" and returns to the previous page. The status table and task table are shown with the updated name or description</p> <p>4. On failed update (invalid statusID), BE returns 404 status code and FE shows "An error has occurred, the status does not exist."</p> <p>5. User can click "Close" or "Back" to return to previous page.</p>

PBI7 Test Scenarios

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PBI	TEST ID	Test Scenario	Expected Results
7	TC-PBI7-EDIT-STATUS-1	normal – try to edit No Status / To Do and cancel	<ol style="list-style-type: none">1. Cannot edit No Status (edit button is disabled or message is shown)2. “Save” button is initially disabled and when statusName is empty3. FE does not send request to BE and returns to previous page with status details unchanged
	TC-PBI7-EDIT-STATUS-2	normal – change all fields with leading and trailing whitespaces	<ol style="list-style-type: none">1. FE trims all fields before sending to BE2. BE trims all fields before updating DB3. The status is updated in DB and status table view correctly
	TC-PBI7-EDIT-STATUS-3	normal – remove description (change to null)	<ol style="list-style-type: none">1. FE sends description=null to BE and shows “The status has been updated” (code 200)2. The task is updated in DB and task table view correctly,3. Status name is unchanged and description field shows "<i>No description is provided</i>”
	TC-PBI7-EDIT-STATUS-4	failed – no status	<ol style="list-style-type: none">1. BE returns 4042. FE shows “An error has occurred, the status does not exist.” and on close of message window, returns to previous page

PBI8 Descriptions

PBI #	PBI NAME	PBI DESCRIPTION / CONDITIONS
8	DELETE-STATUS	<p>1. The "No Status" status cannot be deleted</p> <p>2. If there is no task under the specified status, FE opens modal window asking the user "Do you want to delete <statusName> status?" "Confirm" and "Cancel" options are provided.</p> <p>2.1 When "Confirm", FE sends request to BE to delete the status. If the deletion is successful, BE returns 200 and FE shows "The status has been deleted". In the case the status does not exist, BE returns 404 and FE shows "An error has occurred, the status does not exist."</p> <p>2.2 When "Cancel", FE does not send request to BE and returns to previous page</p>

PBI8 Descriptions

PBI #	PBI NAME	PBI DESCRIPTION / CONDITIONS
8	DELETE-STATUS	<p>3. If there are tasks in the specified status, FE opens modal window asking user “There are <number of tasks> tasks in <statusName> status. In order to delete this status, the system must transfer tasks in this status to existing status. Transfer tasks to [drop-down of existing statuses] ” “Transfer and Delete” and “Cancel” options are provided. FE does not offer/allow the user to transfer tasks to to-delete status.</p> <p>3.1 “Transfer and Delete” is enable only when destination status is selected (there is no default)</p> <p>3.2 When “Transfer and Delete”, FE sends request to BE to transfer tasks in to-delete status to destination status and delete the to-delete status. If the transfer and deletion is successful, BE returns 200 and FE shows “<number of tasks> task(s) have been transferred and the status has been deleted”. In the case the status is no longer exist, BE returns 404 and FE shows “An error has occurred, the status does not exist.”</p> <p>3.3 When “Cancel”, FE does not send request to BE and returns to previous page</p> <p>4. FE shows updated Status table</p>

PBI8 Test Scenarios

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PBI	TEST ID	Test Scenario	Expected Results
8	TC-PBI8-DELETE-STATUS-1	normal – try to delete No Status and cancel	<ol style="list-style-type: none">1. Cannot delete No Status (delete button is disabled or message is shown)2. FE shows confirmation message to delete ‘Max..’ status3. When click “Cancel”, FE does not send request to BE and returns to previous page. The ‘Max..’ status is shown in the status table.
	TC-PBI8-DELETE-STATUS-2	normal – delete status with no task	<ol style="list-style-type: none">1. When click “Confirm”, FE send request to BE2. BE successfully delete the status and returns 2003. FE shows “The status has been deleted” and the deleted status is not shown in the status table
	TC-PBI8-DELETE-STATUS-3	normal – delete status with task(s)	<ol style="list-style-type: none">1. FE shows confirmation message with number of tasks in to-delete status. To-delete status is not shown in drop-down.2. 2 tasks are transferred to destination status and to-delete is deleted
	TC-PBI8-DELETE-STATUS-4	failed – status not exist (delete twice)	<ol style="list-style-type: none">1. FE shows confirmation message2. BE returns 4043. FE shows “An error has occurred, the status does not exist.” and the status is not shown in the status table

PBI9 Descriptions

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PBI #	PBI NAME	PBI DESCRIPTION / CONDITIONS
9	NESTED-PUBLIC-PATH	<ol style="list-style-type: none">1. The system must be accessible from internet (without VPN).2. This includes frontend and backend, but not database.3. The database must be accessible within the server only.4. The public url for each system is 'http://intproj23.sit.kmutt.ac.th/<TEAMCODE>/', e.g., 'http://intproj23.sit.kmutt.ac.th/sy1/'5. 'intproj23.sit.kmutt.ac.th' is maintained by the school admin.6. The team may configure reverse proxy on the host machine to handle multiple versions and CORS issue better.

PBI	TEST ID	Test Scenario	Expected Results
9	TC-PBI9-NESTED-PUBLIC-PATH-1	normal – access FE and BE on public url	<ol style="list-style-type: none">1. Can open all pages correctly2. FE must fetch own API on intproj23 only3. Can call BE on public url (port 8080 or /api/ on 80)

Sprint 4 – new condition

- Each remaining PBIs in Release 1 (PBI10-14) has the same priority and thus the team **may skip** some PBI if necessary

PBI10 Descriptions

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PBI #	PBI NAME	PBI DESCRIPTION / CONDITIONS
10	SORT-TASK-BY-STATUS-TABLE-VIEW	<ol style="list-style-type: none">1. On task list page, when click on "Sort By Status" the tasks in the table are sorted by status name in alphabetical order or in reverse order if clicked again.2. The user can Reset sorting and revert back to default sort (createdDate)3. When there is a change in sort setting (alphabetical/reverse/default), FE updates task table accordingly.

PBI 11 Descriptions

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PBI #	PBI NAME	PBI DESCRIPTION / CONDITIONS
11	FILTER-TASK-BY-STATUS-TABLE-VIEW	<ol style="list-style-type: none">1. On task list page, "Filter" button allows selection of statuses for filtering.<ol style="list-style-type: none">1.1 Multiple statuses can be selected at the same time1.2 Initially, all statuses are selected2. If there is a change in selection, FE sends request to BE for filtering3. The tasks table shows tasks in the selected statuses<ol style="list-style-type: none">3.1 The tasks are sorted based on current sort setting (PBI10).

PBI12 Descriptions

PBI #	PBI NAME	PBI DESCRIPTION / CONDITIONS
12	LIMIT-TASKS-IN-STATUS	<p>0. Status "Done" cannot be Edited or Deleted. This status is considered as the final state.</p> <p>1. Except for "No Status" and "Done", the user can enable/disable a maximum limit of 10 tasks for all other statuses (this value should not be hard-coded.)</p> <p>2. Status Management page, an option is provided to Enable/Disable status limit</p> <p>2.1 On limit Enable, if there are more than 10 tasks in a status, a list of tasks with that status is shown with a choice to change the status of each task separately. Assumption: enabling a limit is done at the start of a project, so the number of in-progress tasks should not be too many (e.g. ≤ 30).</p> <p>3. Add Task and Edit Task Status cannot make the number of task in a status exceed the "limit" value.</p> <p>3.1 The limit Enable/Disable state is shown on Add and Edit modal</p> <p>3.2 On over limit, provide an appropriate message. "The status <statusName> will have too many tasks. Please make progress update task status or complete existing tasks first."</p> <p>4. When deleting a "to-delete" status with existing tasks, if the transfer-destination status plus the number of tasks in to-delete status exceeds the limit, FE shows the message "Cannot transfer to <destination-status> status since it will exceed the limit. Please choose another status to transfer to." and returns/stays on "transfer and delete" modal.</p>

PBI13 (Draft) Descriptions

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PBI #	PBI NAME	PBI DESCRIPTION / CONDITIONS
13	VALIDATE-INPUT-FE-BASIC	<p>1. leading and trailing whitespaces are trimmed for all typed in fields (Done) 2. <empty> values are NOT sent to BE (and not stored in DB) (Done) 3. NOT NULL fields must have data before Add/Edit is allowed (Done)</p> <p>Tasks</p> <p>1. Maximum field size for Add and Edit Task: taskTitle (100), taskDescription(500), taskAssignees (30) (new test case >> exceed max) 2. NOT NULL for taskTitle (Done)</p> <p>Status</p> <p>1. Maximum field size for Add and Edit Status: statusName (50), statusDescription (200) (new test case, exceed max) 2. NOT NULL for statusName (Done) 3. statusName must be UNIQUE, else cannot Add/Edit succesfully (new)</p>

PBI14 (Draft) Descriptions

PBI #	PBI NAME	PBI DESCRIPTION / CONDITIONS
14	VALIDATE- INPUT-BE-BASIC	<p>BE handles validate input, business requirements and technical requirements for TASK and STATUS</p> <ol style="list-style-type: none">1. Business requirements are handled<ol style="list-style-type: none">1.1 status is UNIQUE; add/edit status (new)1.2 cannot edit/delete/limit No Status and Done (new)1.3 maximum field size; add/edit task/status (new test case)1.4 trim leading/trailing white space (Already done!)2. technical issues are handled<ol style="list-style-type: none">2.2 REQUIRED field is missing: invalid request (BE test)<ol style="list-style-type: none">2.2.1 delete status with existing tasks without transfer; returns 400 instead of 5002.3 "<empty>" fields are changed to NULL or return 400 (BE test)2.4 OPTIONAL fields become default values (Already done)2.5 invalid statusID (not in status table) when add/edit/transfer/filter task2.7 to-delete and destination status are the same (transfer and delete)2.8 "to-delete" status does not have any task to transfer (transfer and delete)?2.9 invalid sort parameter (in case the sort is perform by BE)2.10 "transfer" to limited status that will exceed the limit

API Specifications for Sprint 4

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Server:

`http://intproj23.sit.kmutt.ac.th/<TEAMCODE>/api`

URI:

GET

/v2/tasks Gets all task with no pagination

PATCH

/v2/statuses/{id}/maximum-task

GET /v2/tasks with parameters

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GET **/v2/tasks** Gets all task with no pagination

Parameters

Name	Description
sortBy string (query)	a field you want to sort by (Optional), ex. status.name, status.id, id, title, assignees <div>sortBy</div>
filterStatuses array[string] (query)	Array of status name you want to get (Optional), ex. 'to do', 'doing' 'done'

GET /v2/tasks operation success example

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GET **/v2/tasks** Gets all task with no paginat

Parameters

Name	Description
sortBy string (query)	a field you want to sort by (Option
filterStatuses array[string] (query)	Array of status name you want to

Add string item

```
curl -X 'GET' \
  'http://localhost:8080/v2/tasks?sortBy=status.name&filterStatuses=to%20do&filterStatuses=done' \
  -H 'accept: application/hal+json'
```

Request URL
`http://localhost:8080/v2/tasks?sortBy=status.name&filterStatuses=to%20do&filterStatuses=done`

Server response

Code	Details
200	<div>Response body<pre>[{ "id": 4, "title": "_Infrastructure_", "assignees": "ไท้จ้ง กั๋น เพนทวิ", "status": "Done" }, { "id": 9, "title": "Task Title...", "assignees": null, "status": "Done" }, { "id": 2, "title": "Repository", "assignees": null, "status": "To Do" }, { "id": 11, "title": "Task Title...", "assignees": null, "status": "To Do" }]</pre></div>

GET /v2/tasks no matching status example

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filterStatuses
array[string] Array of status name you want to filter (Optional), ex. 'to do', 'doing' 'done'
(query)

waiting poc

Add string item

Execute

Responses

Curl

```
curl -X 'GET' \
'http://localhost:8080/v2/tasks?sortBy=status.name&filterStatuses=waiting%20poc' \
-H 'accept: application/hal+json'
```

Request URL

```
http://localhost:8080/v2/tasks?sortBy=status.name&filterStatuses=waiting%20poc
```

Server response

Code	Details
200	<p>Response body</p> <p>□</p>

PATCH /v2/statuses/{id}/maximum-task

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POST /v2/statuses Create a new status

PATCH /v2/statuses/{id}/maximum-task Limit Task with specific status

Status id to must exist in db

Parameters

Name	Description
id <small>★ required</small> integer(\$int32) (path)	<input type="text" value="id"/>

Request body required

Example Value | **Schema**

```
{
  "id": 0,
  "name": "string",
  "description": "string",
  "limitMaximumTask": true
}
```

Responses	
Code	Description
200	Successful Operation

PATCH /v2/statuses/{id}/maximum-task

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(task in status ≤ 10) example

PATCH /v2/statuses/{id}/maximum-task Limit Task

Status id to must exist in db

Parameters

Name	Description
id <small>★ required</small>	
integer(\$int32)	2
(path)	

Request body required

```
{  "id": 2,  "name": "To Do",  "description": null,  "limitMaximumTask": true}
```

Responses

Curl

```
curl -X 'PATCH' \  
  'http://localhost:8080/v2/statuses/2/maximum-task' \  
  -H 'accept: application/hal+json' \  
  -H 'Content-Type: application/json' \  
  -d '{  
    "id": 2,  
    "name": "To Do",  
    "description": null,  
    "limitMaximumTask": true  
  }'
```

Request URL

```
http://localhost:8080/v2/statuses/2/maximum-task
```

Server response

Code	Details
------	---------

200	
-----	--

	Response body
--	---------------

```
{  "id": 2,  "name": "To Do",  "limitMaximumTask": true,  "noOfTasks": 3}
```

PATCH /v2/statuses/{id}/maximum-task

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(task-status > 10) example

PATCH /v2/statuses/{id}/maximum-task

Status id to must exist in db

Parameters

Name	Description
id * required	
integer(\$int32)	109
(path)	

Request body required

```
{
  "id": 109,
  "name": "To Do",
  "description": null,
  "limitMaximumTask": true
}
```

Response with
task list when no
of task-status is >
10

```
curl -X 'PATCH' \
  'http://localhost:8080/v2/statuses/109/maximum-task' \
  -H 'accept: application/hal+json' \
  -H 'Content-Type: application/json' \
  -d '{
    "id": 109,
    "name": "To Do",
    "description": null,
    "limitMaximumTask": true
  }'
```

Request URL

http://localhost:8080/v2/statuses/109/maximum-task

Server response

Code

Details

200

Response body

```
{
  "id": 109,
  "name": "Waiting",
  "limitMaximumTask": false,
  "noOfTasks": 12,
  "tasks": [
    {
      "id": 9,
      "title": "Task Title...",
      "assignees": null,
      "status": "Waiting"
    },
    {
      "id": 10,
      "title": "Task Title...",
      "assignees": null,
      "status": "Waiting"
    }
  ]
}
```

POST /v2/tasks with validation

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POST **/v2/tasks** Create a new task

New task must valid

Parameters

No parameters

Request body required

```
{
  "title": null,
  "description": "Study technology and law before start project",
  "assignees": "Somchai Somsak SomsriSomchai Somsak SomsriSomchai Somsak SomsriSom",
  "status": 1
}
```

Request URL

http://localhost:8080/v2/tasks

Server response

Code	Details
400	Error: response status is 400

Response body

```
{
  "status": 400,
  "message": "Validation error. Check 'errors' field for details. taskForCreateOrUpdate",
  "instance": "uri=/v2/tasks",
  "errors": [
    {
      "field": "title",
      "message": "must not be null"
    },
    {
      "field": "title",
      "message": "must not be blank"
    },
    {
      "field": "assignees",
      "message": "size must be between 0 and 30"
    }
  ]
}
```

SAMPLE UI : task list sort by status

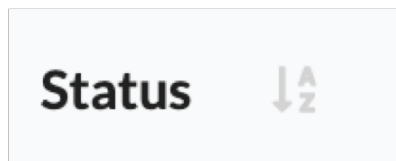
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IT-Bangmod Kradan Kanban

Manage Status			
	Title	Assignees	Status
1	TaskTitle1TaskTitle2TaskTitle3TaskTitle4TaskTitle5TaskTitle6TaskTitle7TaskTitle8TaskTitle9TaskTitle0	Assignees1Assignees2Assignees3	No Status
2	Repository	Unassigned	To Do
3	ดาต้าเบส	あなた、彼、彼女 (私ではありません)	Doing
4	_Infrastructure_	ทำงาน กับ เพนกวิน	Done

itbkk-status-sort

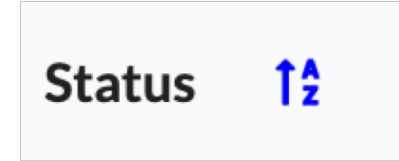
default sort



sort by status ascending



sort by status descending



SAMPLE UI : task list filter

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IT-Bangmod Kradan Kanban

Filter by stauts(es) ✕ `itbkk-status-filter` Manage Status

+	Title	Assignees	Status ↑ 2
1 ⋮	TaskTitle1TaskTitle2TaskTitle3TaskTitle4TaskTitle5TaskTitle6TaskTitle7TaskTitle8TaskTitle9TaskTitle0	Assignees1Assignees2Assignees3	No Status
2 ⋮	Repository	Unassigned	To Do
3 ⋮	ดาต้าเบส	あなた、彼、彼女 (私ではありません)	Doing
4 ⋮	_Infrastructure_	ไถ่จวง กับ เพนกวิ้น	Done

Filter by stauts(es) ✕ `itbkk-filter-clear`

`itbkk-filter-item` `itbkk-filter-item`

`To Do` ✕ `Doing` ✕

`itbkk-filter-item`
`itbkk-filter-item-clear`

- Working software : 60%
 - UAT
 - Depends on the amount of PBI completed
- Technical (quality and understanding) : 40%
 - Client-side 10%
 - Server-side 10%
 - DevOps/Infra/Integration 10%
 - Project management 10%
 - Team communications
(daily meeting, meeting with advisor, amount of communications)
 - Team planning (task board)
 - Meeting the schedule
 - Team work

Each team member must contribute at least 30% or the individual score will be penalized accordingly.

- Working software on development server
- Project management :
 - real-time task board
 - daily meeting recordings
 - individual contribution and retrospective report
- Course feedback

- Date: May 29-30, 2024; 13.00-17.00
- Format: 2 tracks
- There are 3 exam rooms for each track
 - Client-side
 - Server-side
 - DevOps/Infra/Integration
- 15-20 minutes each