

# Problem Description

Related materials are expected to be carried and processed together, but there is no existing data that directly binds them or makes them usable as a group. Because of this, materials need to be grouped / classified manually by an operator.

This process has been done for years using pen and paper. However, it is hard to track and correct mistakes, and once the work is done physically, it is not easy to reuse or integrate the results elsewhere. For these reasons, this process needs to be moved into the digital world through a web-based application.

## Definitions

### ***Project***

A group of materials.

### ***Project Number***

The ID of a project. It is a 10-digit number and always starts with 70480.

### ***Material***

An element that will be used in production. In the system, it is represented as a string with a length between 10 and 20 characters.

## Application Requirements

1 - The user shall visit the page  
.../classifymaterials and:

- Either select one of the latest projects or search for a project by entering the project number via a select box.
- After selecting a project, the user shall see all materials belonging to that project.
- The user shall classify each material as one of the following: “Class A”, “Class B”, “Class C”, “Class D”.
- This classification process is critical and leaves no room for operator error. The interface should be designed in a way that the operator can work comfortably and confidently, and easily notice (visually) if something was selected incorrectly by mistake.
- After all materials are classified, the operator shall confirm the operation by clicking a button labeled “Confirm”.

2 - The user shall also be able to visit the page  
.../viewclassifications and:

- Search for and select a project by project number.
- View the classification data in an AG Grid (React) table.
- Ensure that the table height adjusts dynamically to the available page space, instead of using fixed pixel values.

## Extra Requirements

- i18n shall be implemented, and the active language shall be changeable (English, Turkish) via a button located in the IX menu on the left side of the screen.
- Both pages shall support URL parameter handling. If a project number is provided in the URL (for example: ?project=7048011111), the corresponding project shall be selected automatically on page load. Additionally, when the user selects a different project from the UI, the URL shall be updated accordingly.
- The AG Grid table shall be filterable by any column, using the existing values available in each column.
- The AG Grid table shall be downloadable in XLSX format. (Use ExcelJS)

## Setup

Head to the IX Siemens documentation website and create a new react project following the docs steps, using recommended tools (use ix version 3)

AG Grid React and Siemens IX v3 may throw version compatibility errors but you can bypass them by modifying package-lock.json

## JSON Data to Work With

For /classifymaterials

```
const classes = ["Class A", "Class B", "Class C", "Class D"];
```

```
const latestProjectsData = [
  {
    projectNumber: "7048011111",
    projectName: "Sie Project 1",
    materials: [
      "A653KJDHAX9Q",
      "B91XK7QDH2LM",
      "C4Z8A9QWERTY",
      "D77MNBVCXZ12",
      "E8Q2L9KJHGF",
      "F0A9S8D7F6GH",
      "G6H5J4K3L2Q9",
      "H1Z9X8C7V6BN",
      "JQ8W7E6R5T4Y",
      "K9L8M7N6B5V",
      "LQ2W3E4R5T6Y",
      "M7N8B9V0C1XZ",
      "N5M4B3V2C1X9",
      "P0O9I8U7Y6T",
      "QW9E8R7T6Y5U",
      "R5T6Y7U8I9O",
      "S8D7F6G5H4J",
      "T6Y7U8I9O0P",
      "U9I8O7P6L5K",
      "V5B6N7M8Q9W",
      "WERTY9U8I7O",
      "X9C8V7B6N5M",
      "Y7T6R5E4W3Q",
      "Z1X2C3V4B5N",
      "A9S8D7F6G5H",
      "B4N5M6Q7W8E",
      "C7V6B5N4M3Q",
      "D8F7G6H5J4K",
      "E6R5T4Y3U2I",
      "F9G8H7J6K5L",
    ],
  },
  {
    projectNumber: "7048022222",
    projectName: "Sie Project 2",
    materials: [
      "A653KJDHAX9Q",
      "B91XK7QDH2LM",
      "C4Z8A9QWERTY",
      "D77MNBVCXZ12",
    ]
  }
]
```

```
"E8Q2L9KJHGF",
"F0A9S8D7F6GH",
"G6H5J4K3L2Q9",
"H1Z9X8C7V6BN",
"JQ8W7E6R5T4Y",
],
},
{
  projectNumber: "7048033333",
  projectName: "Abc Project",
  materials: [
    "A653KJDHAX9Q",
    "B91XK7QDH2LM",
    "C4Z8A9QWERTY",
  ],
},
{
  projectNumber: "7048044444",
  projectName: "Def Project",
  materials: [],
},
{
  projectNumber: "7048055555",
  projectName: "Sample Project 1",
  materials: [],
},
{
  projectNumber: "7048066666",
  projectName: "Sample Project 2",
  materials: [],
},
// Copy and paste a few more of these samples for better UI simulation
];
```

For /viewclassifications

```
//Lets say 7048022222 is searched and selected.  
const classifiedMaterialsDataOfProject = [  
  {  
    materialNumber: "A653KJDHAX9Q",  
    classification: "Class D",  
    classifiedBy: "John Doe",  
    classificationDate: "10.09.2025 10:30:21",  
  },  
  {  
    materialNumber: "B91XK7QDH2LM",  
    classification: "Class C",  
    classifiedBy: "John Doe",  
    classificationDate: "10.09.2025 12:30:22",  
  },  
  {  
    materialNumber: "C4Z8A9QWERTY",  
    classification: "Class B",  
    classifiedBy: "John Doe",  
    classificationDate: "10.09.2025 12:30:24",  
  },  
  {  
    materialNumber: "D77MNBVCXZ12",  
    classification: "Class A",  
    classifiedBy: "John Doe",  
    classificationDate: "10.09.2025 12:30:25",  
  },  
  {  
    materialNumber: "E8Q2L9KJHGF",  
    classification: "Class A",  
    classifiedBy: "John Doe",  
    classificationDate: "10.09.2025 12:30:20",  
  },  
  {  
    materialNumber: "F0A9S8D7F6GH",  
    classification: "Class C",  
    classifiedBy: "John Doe",  
    classificationDate: "10.09.2025 10:30:20",  
  },  
  {  
    materialNumber: "G6H5J4K3L2Q9",  
    classification: "Class C",  
    classifiedBy: "John Doe",  
    classificationDate: "10.09.2025 12:32:20",  
  },  
  {  
    materialNumber: "H1Z9X8C7V6BN",  
    classification: "Class D",  
    classifiedBy: "John Doe",  
    classificationDate: "10.09.2025 12:31:20",  
  },
```

```
},
{
  materialNumber: "JQ8W7E6R5T4Y",
  classification: "Class D",
  classifiedBy: "John Doe",
  classificationDate: "10.09.2025 11:30:20",
},
];
```

For project search component (IxSelect)

```
const foundProjectsOptionsAfterSearch = [
  { projectNumber: "7048011111", projectName: "Sie Project 1" },
  { projectNumber: "7048022222", projectName: "Sie Project 2" },
  { projectNumber: "7048033333", projectName: "Abc Project" },
  { projectNumber: "7048044444", projectName: "Def Project" },
  // ...
];
```