User Guide for Ternopil Airport Management System

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General System Overview

In this guide we will briefly go through main functionalities of created Asset Management system. The system is used for making the creation and tracking of all Assets which applies to our Airport. You can classify them, describe the condition of an Asset and can plan appropriate maintenance, know who manages appropriate Assets and inform about any system interruptions. You can also work with multiple Assets that are connected by some characteristics (Asset Class). It should be used for high-level actions for the whole class. This guide should give you an understanding of how the system works and how to do main things that is required from a User (like Asset creation, tracking, maintenance etc.).

1 Login

When you open the application in the browser, you need to enter login and password. When login is successfully completed, you will be placed to the main page with this section: Asset Acquisition, User/Personnel and Table Codes.

2 Asset Acquisition

In this section you can manage Asset, Asset Financial Details (Asset Fin Det) and Project information. To create new Asset, press plus button at left top corner. You will be prompted with window, where you will need to provide description, initial cost, acquire date, project, asset type and service status, expiration date. Save this asset and you will see it in the list. Also you can indicate Service Status information such as start date and service status.

2.1 Asset

While Asset Type and Asset Class are high-level representations of asset groups, Asset is a representation of single Asset.
Here are main properties of an Asset:

regulatory - boolean value to indicate whether this asset is regulatory or not. We will need this while doing maintenance.

number - unique asset number, auto-generated.

keyAsset - boolean value to indicate whether this asset is key asset. We will need this to report Outages/Service Interruptions for an Asset.

finDet - financial details for this asset.

expDays - days to expiration. How many days we can use this Asset before it becomes outdated. Will be needed to know service status of Asset.

usageRate - indicates how old our Asset is. Numerically it is a ratio of how many days that Asset is being used to how many days it can be used at all. This percent will clearly show a difference between older and younger assets.

serviceStatus - service status of this Asset.
active - indicates whether an Asset is in usage.

2.2 Asset Financial Detail

Asset Financial Detail (AssetFinDet) is used to keep financial details of an Asset and is connected with it.
Has the following properties:

key - Asset key.
initCost - initial Asset creation cost.
acquireDate - the date when asset was made or purchased.
project - capital expenditure project for the acquisition of this asset.

3 Users/Personnel

This is section where you can add users that will own, operate or manage Asset Types or single Assets. You can also manage existing users. You can also register new Role, Business Unit or Organisation of Asset, Asset Types owners adding its name and description.

4 Asset Table Codes

The main logic of this section is to keep all high-level information of Airport's Assets in one place. Here you can see listed sections: Asset Class, Asset Type and Asset Type Ownership, Error Report which allows us to report an error related to an asset.

System Engineers, Maintenance planners or other users may need to operate not only on each Asset separately but to manage all Assets that relate to some group. Asset Class and Asset Type are created to centralize Asset Management on a high level.

4.1 Asset Class

Asset Class is used for classification of available Assets to different categories. We do no have any limitations about Asset Classes so you can create any unique class that is needed.
While doing this remember about main Asset Class properties:

name - unique name for Asset Class which should have minimal length of 3 characters.

desc - description of this Asset Class where you can identify all relevant information about this class.

You can also set the critical value of this Asset Class so while doing some work with different Asset Classes you will know their importance

4.2 Asset Type

Asset Type is connected with Asset Class and is used to specify the type of given Asset.
Here are main properties of Asset Type:

name - unique name for Asset Type without length limitations.
desc - description of Asset Type.
assetClass - value of Asset Class for this Asset Type. Can be chosen only from available Asset Classes.
currentOwnership - information about owner of Asset Type.
active - boolean value that indicates whether our Asset Type is in usage or not.

4.3 Asset Type Ownership/Asset Type Operator/Asset Type Manager

This part is created to give our users an ability to select asset type, indicate the date when this Asset Type was given under control or ownership and indicate either Role, Business Unit or Organization of it.
Here are main properties for Asset Type Ownership, Asset Type Operator, Asset Type Manager:

assetType - Asset Type value from the database.
startDate - date when Asset Type was given under control/ownership.
role, businessUnit, organization - information about the owner's Role, Business Unit or Organization. Only one can be used.

5 Asset Status and Maintenance

When we have a lot of Assets it is more than needed to have a good system to control Assets status and make needed maintenance actions. When we create an Asset we set the value expDays for it. It indicates how many days an Asset can work well. So at any stage we can know how many days Asset will be safely available for usage or is it already outdated. Also such information as "regulatory" or "keyAsset" values of an Asset will be of a great help while planning an appropriate maintenance.

5.1 Asset Service Status

Gives an ability to specify Service Status for every single Asset, so the Assets maintenance can be done in a more appropriate way. For this an User have to enter following values:

key - an identifier of an Asset.

serviceStatus - status of an Asset that we want to specify.
creationDate - date when this status was created.

5.2 Asset Outages/Service Interruption

When user see that some Assets are not working well or are not working at all he can create a report for appropriate commissions about noticed errors. For that User has to choose from existing Assets the one that has troubles and enter an Error info. System will check whether this Asset is keyAsset or regulatoryAsset and will send an error message to needed commission.