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Demo

Import asset and run included scenes for features demonstration.

How it works?

Simple Drag and Drop consists of two C# scripts that need to be attached to corresponding GameObjects:

- **DragAndDropItem** – any item needs to be dragged;
- **DragAndDropCell** – cell which item may be dragged from and may be dropped in.

DragAndDropItem operates *OnBeginDrag*, *OnDrag* and *OnEndDrag* events from *EventsSystems*.

DragAndDropCell operates *OnDrop* event.

The sequence of events on every item's drag and drop is:

1. Item → *OnBeginDrag*;
2. Item → *OnDrag* (many times);
3. Cell → *OnDrop*;
4. Item → *OnEndDrag*.

When item is dragged *DragAndDropItem* creates item's icon and makes it following the cursor.

On item's drop *DragAndDropCell* verifies source cell's type and destination cell's type and makes decision to place item into new cell. After that it waits for *OnEndDrag* event and sends message to parent GameObjects to notify about items exchange.

Any script in parent GameObjects may operate items exchange. To do this add method *OnSimpleDragAndDropEvent(DragAndDropCell.DropDescriptor desc)*, where *desc* is descriptor with information about item drop event:

- *triggerType* – Type of occurred event;
- *sourceCell* - From this cell item was dragged;
- *destinationCell* - Into this cell item was dropped;
- *item* - Dropped item;
- *permission* – Special flag to control drag and drop operations with game logic.

Drag and drop event could be of the following types:

- *DropRequest* – Helps to organise control by game logic;
- *DropEventEnd* – Notificaton about completed drag and drop event (it can be successful or denied by game logic in drop request);
- *ItemAdded* – Item added via game logic using *AddItem* method;
- *ItemWillBeDestroyed* – Called if item will be destroyed in cell.

You may forbid any drag and drop event by setting permission flag to false on drop request.

Refer to script *DummyControlUnit* as an example of *OnSimpleDragAndDropEvent* handling.

How to integrate it?

1. Copy into your project:
 - Scripts: *DragAndDropItem*, *DragAndDropCell*;
 - Prefabs: *Item*, *Cell*;
2. Place on scene as much cells as you need (use *Cell* prefab);
3. Set required cell's type for every cell in inspector;
4. Use *Item* prefab to create interactive items and place them into cells (in scene or with method *DragAndDropCell.AddItem* in script).

Useful info

1. To add item into cell in runtime use method *DragAndDropCell.AddItem*;
2. To remove item from cell in runtime use method *DragAndDropCell.RemoveItem*;
3. *Do NOT destroy item on drop request because it will give undefined system behavior.*