

```

1 private void ParentObjectsWithinColliders()
2 {
3     if (GUILayout.Button("Create Section Prefabs"))
4     {
5         // 0) reset lists in case of scene change
6         _sectionCreatorsToCheckOverlap.Clear();
7         _sectionCreatorsStructured.Clear();
8         // 0.1) adjust scene string so level section don't have "Work" in their names
9         AdjustSceneString();
10
11         // 1) Find the blackout Parent
12         BlockoutParent blackoutParent = FindObjectOfType<BlockoutParent>();
13         if (blackoutParent == null)
14         {
15             Debug.LogWarning("Could not find a BlockoutParent script in the scene!");
16             return;
17         }
18
19         // 2) Find the sectionCreatorPrefabs and unpack them
20         _sectionCreatorsInScene = FindObjectsOfType<LevelSectionCreator>().ToList();
21         for (int i = 0; i < _sectionCreatorsInScene.Count; i++)
22         {
23             if (PrefabUtility.IsAnyPrefabInstanceRoot(_sectionCreatorsInScene[i].gameObject) == true)
24             {
25                 // this being registered as a user action allows it to be Undo-d
26                 PrefabUtility.UnpackPrefabInstance(_sectionCreatorsInScene[i].gameObject, PrefabUnpackMode.OutermostRoot,
27                     InteractionMode.UserAction);
28             }
29         }
30
31         // 2.1) assign starting section
32         LevelSectionCreator sectionZero = null;
33         int amountOfStartingSectionsFound = 0;
34         for (int i = 0; i < _sectionCreatorsInScene.Count; i++)
35         {
36             if (_sectionCreatorsInScene[i].IsStartingSection)
37             {
38                 sectionZero = _sectionCreatorsInScene[i];
39                 amountOfStartingSectionsFound += 1;
40             }
41         }
42         if (amountOfStartingSectionsFound == 0)
43         {
44             Debug.LogWarning("No Starting Section found! make sure atleast 1 has the bool IsStart 'checked'");
45             // undo-ing the unpacking of the section creators
46             Undo.PerformUndo();
47             return;
48         }
49         else if (amountOfStartingSectionsFound > 1)
50         {
51             Debug.LogWarning("Found more than 1 Starting Section! make sure only 1 has the bool IsStart 'checked'");
52             // undo-ing the unpacking of the section creators
53             Undo.PerformUndo();
54             return;
55         }
56
57         // 2.2) use list of sections we need to check for collision
58         for (int i = 0; i < _sectionCreatorsInScene.Count; i++)
59         {
60             _sectionCreatorsToCheckOverlap.Add(_sectionCreatorsInScene[i]);
61         }
62         // 2.3) Remove starting section from sectionCreatorsToCheck
63         _sectionCreatorsToCheckOverlap.Remove(sectionZero);
64         // 2.4) Add SectionZero to structured list
65         _sectionCreatorsStructured.Add(sectionZero);
66         // 2.5) use the starting section to progressively find following sections by checking the heads
67         FindFollowingSectionCreator(sectionZero);
68
69         // 3) Next, get all objects, duplicate them, add to temp list, check tempList objects for inside of bounds, parent objects
70         // 3.1) duplicate the blackout_parent
71         BlockoutParent blackoutCopy = Instantiate(blockoutParent);
72         // 3.2) disable the original blackout
73         blackoutParent.gameObject.SetActive(false);
74         // 3.3) add all children of the copy to a temp list
75         List<GameObject> tempList = new List<GameObject>();
76         ParentAllTheThings(tempList, blackoutCopy.transform);
77
78         // 4) iterate over each sectionCreator...
79         for (int i = 0; i < _sectionCreatorsStructured.Count; i++)
80         {
81             // 4.1) iterate over each collider...
82             foreach (BoxCollider coll in _sectionCreatorsStructured[i].CollidersDefiningMySection)
83             {
84                 // 4.2) parent any objects that fall within the bounds (only check first children of the blackout)
85                 List<GameObject> objectsAdded = new List<GameObject>();
86                 foreach (GameObject obj in tempList)
87                 {
88                     if (coll.bounds.Contains(obj.transform.position))
89                     {
90                         // check if the object has pickups its children
91                         // if so -> add the children instead of the obj itself
92                         List<PickUp> pickupsFound = obj.GetComponentsInChildren<PickUp>(true).ToList();
93                         if (pickupsFound.Count > 0)
94                         {

```

```

96         GameObject pickupChild = null;
97         for (int k = 0; k < pickupsFound.Count; k++)
98         {
99             pickupChild = pickupsFound[k].gameObject;
100
101             pickupChild.transform.SetParent(_sectionCreatorsStructured[i].Section.PickupsParent.gameObject.transform);
102             objectsAdded.Add(pickupChild);
103         }
104         continue;
105     }
106
107     // any other gameobject that does not have pickups in its children
108     objectsAdded.Add(obj);
109
110     // differentiate between pickups and environment
111     if (obj.TryGetComponent(out Pickup pickup))
112     {
113         obj.transform.SetParent(_sectionCreatorsStructured[i].Section.PickupsParent.gameObject.transform);
114     }
115     else
116     {
117         obj.transform.SetParent(_sectionCreatorsStructured[i].Section.ParentEnvironment.transform);
118     }
119 }
120 }
121
122 // 4.3) remove previously added objects from tempList (performance tweak)
123 foreach (GameObject obj in objectsAdded)
124 {
125     if (tempList.Contains(obj))
126     {
127         tempList.Remove(obj);
128     }
129 }
130 objectsAdded.Clear();
131 }
132
133 // 4.4) name our section something fitting
134 _sectionCreatorsStructured[i].Section.name = "PV_LevelSection_" + _adjustedSceneString + i;
135 _sectionCreatorsStructured[i].Section.ParentEnvironment.name = "Environment_" + i;
136 _sectionCreatorsStructured[i].Section.PickupsParent.gameObject.name = "Pickups_" + i;
137
138 // 4.5) log data regarding the section into the console
139 LogCurrentSectionData(_sectionCreatorsStructured[i].Section);
140 }
141 LogAllData();
142
143 Debug.Log("finished parenting blackout");
144
145 // 5) get correct directory dependant on our scene
146 string levelIndexString = DecodeSceneString()[0].ToString();
147 string levelSceneIndexString = DecodeSceneString()[1].ToString();
148 string localPath = _localPathPrefix + levelIndexString + _localPathMidfix + levelSceneIndexString + _localPathSuffix;
149 // 5.1) delete folder and its contents, then Re-create it
150 if (Directory.Exists(localPath))
151 {
152     Directory.Delete(localPath, true);
153 }
154 Directory.CreateDirectory(localPath);
155
156 // 6) create prefab of each section
157 for (int i = 0; i < _sectionCreatorsStructured.Count; i++)
158 {
159     Section sectionOfInterest = _sectionCreatorsStructured[i].Section;
160
161     // 6.1) get the Section of interest, Unparent it (prefab will remember it's world position this way)
162     GameObject objectToPrefabify = sectionOfInterest.gameObject;
163     objectToPrefabify.transform.SetParent(null);
164     // 6.2) Create the new Prefab.
165     PrefabUtility.SaveAsPrefabAsset(objectToPrefabify, localPath + objectToPrefabify.name + ".prefab");
166     // 6.3) Destroy all the children in environment and pickups (wipe clean for a scene reset) of current Section
167     for (int j = sectionOfInterest.ParentEnvironment.transform.childCount - 1; j >= 0; j--)
168     {
169         DestroyImmediate(sectionOfInterest.ParentEnvironment.transform.GetChild(j).gameObject);
170     }
171     for (int j = sectionOfInterest.PickupsParent.transform.childCount - 1; j >= 0; j--)
172     {
173         DestroyImmediate(sectionOfInterest.PickupsParent.transform.GetChild(j).gameObject);
174     }
175
176     // 6.4) Re-parent it to its creator
177     objectToPrefabify.transform.SetParent(_sectionCreatorsStructured[i].transform);
178 }
179
180 // 7) reset the scene by destroying duplicates
181 // 7.1) Re-enable the old blackout
182 blackoutParent.gameObject.SetActive(true);
183 // 7.2) destroy copied blackout (should ideally be empty object after all of its children have been re-parented)
184 DestroyImmediate(blockoutCopy.gameObject);
185
186 // 8) undo-ing the unpacking of the section creators
187 Undo.PerformUndo();
188 }
189 }
190

```