Namespace ProposedArchitecture

Classes

Common

Manager hub

GlobalProperties

Stores global game values and constants

Inventory

Player

SaveManager

Responsible for handling the SnapshotWrapper, ISnapshot and ISnapshotModel instances. Hands out SMRIs.

Weapon

WorldLoader

Handles the world creation and order of SMRIs simultaneously.

Structs

SInventory

SPlayer

SWeapon

Interfaces

ISnapshot

Marks a class as ISnapshot-able

ISnapshotModel

Class Common

Namespace: ProposedArchitecture

Assembly: com.mad.snapshot.dll

Manager hub

```
[DefaultExecutionOrder(-500)]
public class Common : MonoBehaviour
```

Inheritance

object ← Object ← Component ← Behaviour ← MonoBehaviour ← Common

Inherited Members

MonoBehaviour.IsInvoking() , MonoBehaviour.CancelInvoke() , MonoBehaviour.Invoke(string, float) , MonoBehaviour.InvokeRepeating(string, float, float) , MonoBehaviour.CancelInvoke(string) , MonoBehaviour.IsInvoking(string) , MonoBehaviour.StartCoroutine(string) , MonoBehaviour.StartCoroutine(string, object) , MonoBehaviour.StartCoroutine(IEnumerator) , MonoBehaviour.StartCoroutine_Auto(IEnumerator) , MonoBehaviour.StopCoroutine(IEnumerator) , MonoBehaviour.StopCoroutine(Coroutine) , MonoBehaviour.StopCoroutine(string) , MonoBehaviour.StopAllCoroutines() , MonoBehaviour.print(object) , MonoBehaviour.destroyCancellationToken , MonoBehaviour.useGUILayout , MonoBehaviour.runInEditMode , Behaviour.enabled , Behaviour.isActiveAndEnabled , Component.GetComponent(Type) , Component.GetComponent<T>() , Component.TryGetComponent(Type, out Component) , Component.TryGetComponent<T>(out T) , Component.GetComponent(string) , Component.GetComponentInChildren(Type, bool) , Component.GetComponentInChildren(Type) , Component.GetComponentInChildren<T>(bool) , Component.GetComponentInChildren<T>() , Component.GetComponentsInChildren(Type, bool) , Component.GetComponentsInChildren(Type) , Component.GetComponentsInChildren<T>(bool) , Component.GetComponentsInChildren<T>(bool, List<T>) , Component.GetComponentsInChildren<T>() , Component.GetComponentsInChildren<T>(List<T>) , Component.GetComponentInParent(Type, bool) , Component.GetComponentInParent(Type) , Component.GetComponentInParent<T>(bool) , Component.GetComponentInParent<T>() , Component.GetComponentsInParent(Type, bool) , Component.GetComponentsInParent(Type) , Component.GetComponentsInParent<T>(bool) , Component.GetComponentsInParent<T>(bool, List<T>) , Component.GetComponentsInParent<T>() , Component.GetComponents(Type) , Component.GetComponents(Type, List<Component>) , Component.GetComponents<T>(List<T>) , Component.GetComponents<T>() , Component.GetComponentIndex() , Component.CompareTag(string) ,

Component.SendMessageUpwards(string, object, SendMessageOptions) , Component.SendMessageUpwards(string, object) , Component.SendMessageUpwards(string) , Component.SendMessageUpwards(string, SendMessageOptions) , Component.SendMessage(string, object) , Component.SendMessage(string) , Component.SendMessage(string, object, SendMessageOptions) , Component.SendMessage(string, SendMessageOptions) , Component.BroadcastMessage(string, object, SendMessageOptions) , Component.BroadcastMessage(string, object) , Component.BroadcastMessage(string) , Component.BroadcastMessage(string, SendMessageOptions) , Component.transform , Component.gameObject , Component.tag , Object.GetInstanceID() , Object.GetHashCode() , Object.Equals(object) , Object.InstantiateAsync<T>(T) , Object.InstantiateAsync<T>(T, Transform) , Object.InstantiateAsync<T>(T, Vector3, Quaternion) , Object.InstantiateAsync<T>(T, Transform, Vector3, Quaternion) , Object.InstantiateAsync<T>(T, int) , Object.InstantiateAsync<T>(T, int, Transform) , Object.InstantiateAsync<T>(T, int, Vector3, Quaternion) , Object.InstantiateAsync<T>(T, int, ReadOnlySpan<Vector3>, ReadOnlySpan<Quaternion>) , Object.InstantiateAsync<T>(T, int, Transform, Vector3, Quaternion) , Object.InstantiateAsync<T>(T, int, Transform, ReadOnlySpan<Vector3>, ReadOnlySpan<Quaternion>) , Object.Instantiate(Object, Vector3, Quaternion) , Object.Instantiate(Object, Vector3, Quaternion, Transform) , Object.Instantiate(Object) , Object.Instantiate(Object, Scene) , Object.Instantiate(Object, Transform) , Object.Instantiate(Object, Transform, bool) , Object.Instantiate<T>(T) , Object.Instantiate<T>(T, Vector3, Quaternion) , Object.Instantiate<T>(T, Vector3, Quaternion, Transform) , Object.Instantiate<T>(T, Transform) , Object.Instantiate<T>(T, Transform, bool) , Object.Destroy(Object, float) , Object.Destroy(Object) , Object.DestroyImmediate(Object, bool) , Object.DestroyImmediate(Object) , Object.FindObjectsOfType(Type) , Object.FindObjectsOfType(Type, bool) , Object.FindObjectsByType(Type, FindObjectsSortMode) , Object.FindObjectsByType(Type, FindObjectsInactive, FindObjectsSortMode) , Object.DontDestroyOnLoad(Object) , Object.DestroyObject(Object, float) , Object.DestroyObject(Object) , Object.FindSceneObjectsOfType(Type) , Object.FindObjectsOfTypeIncludingAssets(Type) , Object.FindObjectsOfType<T>() , Object.FindObjectsByType<T>(FindObjectsSortMode) , Object.FindObjectsOfType<T>(bool) , Object.FindObjectsByType<T>(FindObjectsInactive, FindObjectsSortMode) , Object.FindObjectOfType<T>() , Object.FindObjectOfType<T>(bool) , Object.FindFirstObjectByType<T>() , Object.FindAnyObjectByType<T>() , Object.FindFirstObjectByType<T>(FindObjectsInactive) , Object.FindAnyObjectByType<T>(FindObjectsInactive) , Object.FindObjectsOfTypeAll(Type) , Object.FindObjectOfType(Type) , Object.FindFirstObjectByType(Type) , Object.FindAnyObjectByType(Type) , Object.FindObjectOfType(Type, bool) ,

Object.FindFirstObjectByType(Type, FindObjectsInactive) , Object.FindAnyObjectByType(Type, FindObjectsInactive) , Object.ToString() , Object.name , Object.hideFlags , object.Equals(object, object) , object.GetType() , object.MemberwiseClone() , object.ReferenceEquals(object, object)

Fields

Instance

Returns the Common singleton

```
public static Common Instance
```

Field Value

Common

Properties

SaveManager

Returns the SaveManager reference

```
public SaveManager SaveManager { get; }
```

Property Value

SaveManager

WorldLoader

Returns the WorldLoader reference

```
public WorldLoader WorldLoader { get; }
```

Property Value

WorldLoader

Class GlobalProperties

Namespace: ProposedArchitecture

Assembly: com.mad.snapshot.dll

Stores global game values and constants

```
public static class GlobalProperties
```

Inheritance

object ← GlobalProperties

Inherited Members

object.Equals(object) , object.Equals(object, object) , object.GetHashCode() , object.GetType() , object.MemberwiseClone() , object.ReferenceEquals(object, object) , object.ToString()

Fields

SaveFolderName

The save folder name.

```
public const string SaveFolderName = "SnapshotSaves"
```

Field Value

string

SavePath

The save directory absolute path

```
public static readonly string SavePath
```

Field Value

string

Interface ISnapshot

Namespace: ProposedArchitecture

Assembly: com.mad.snapshot.dll

Marks a class as ISnapshot-able

```
public interface ISnapshot
```

Properties

Smri

The class should have an SMRI field

```
uint Smri { get; }
```

Property Value

uint

Methods

CacheModel()

```
void CacheModel()
```

ConstructModel()

```
ISnapshotModel ConstructModel()
```

Returns

ISnapshotModel

GetSnapshotModelType()

```
Type GetSnapshotModelType()
```

Returns

Type

LoadModel(ISnapshotModel)

```
void LoadModel(ISnapshotModel _model)
```

Parameters

`_model` ISnapshotModel

RegisterToSaveManager()

```
void RegisterToSaveManager()
```

RetrieveReferences(int[])

```
void RetrieveReferences(int[] _refSmris)
```

Parameters

`_refSmris` int[]

UnregisterToSaveManager()

```
void UnregisterToSaveManager()
```

Interface ISnapshotModel

Namespace: ProposedArchitecture

Assembly: com.mad.snapshot.dll

```
public interface ISnapshotModel
```

Properties

RefSmris

The class/struct should have an int array to store its references SMRIs

```
int[] RefSmris { get; set; }
```

Property Value

int[]

Smri

The class/struct should have an SMRI field

```
uint Smri { get; set; }
```

Property Value

uint

Class Inventory

Namespace: ProposedArchitecture

Assembly: com.mad.snapshot.dll

```
public class Inventory : MonoBehaviour, ISnapshot
```

Inheritance

object ← Object ← Component ← Behaviour ← MonoBehaviour ← Inventory

Implements

ISnapshot

Inherited Members

MonoBehaviour.IsInvoking() , MonoBehaviour.CancelInvoke() , MonoBehaviour.Invoke(string, float) , MonoBehaviour.InvokeRepeating(string, float, float) , MonoBehaviour.CancelInvoke(string) , MonoBehaviour.IsInvoking(string) , MonoBehaviour.StartCoroutine(string) , MonoBehaviour.StartCoroutine(string, object) , MonoBehaviour.StartCoroutine(IEnumerator) , MonoBehaviour.StartCoroutine_Auto(IEnumerator) , MonoBehaviour.StopCoroutine(IEnumerator) , MonoBehaviour.StopCoroutine(Coroutine) , MonoBehaviour.StopCoroutine(string) , MonoBehaviour.StopAllCoroutines() , MonoBehaviour.print(object) , MonoBehaviour.destroyCancellationToken , MonoBehaviour.useGUILayout , MonoBehaviour.runInEditMode , Behaviour.enabled , Behaviour.isActiveAndEnabled , Component.GetComponent(Type) , Component.GetComponent<T>() , Component.TryGetComponent(Type, out Component) , Component.TryGetComponent<T>(out T) , Component.GetComponent(string) , Component.GetComponentInChildren(Type, bool) , Component.GetComponentInChildren(Type) , Component.GetComponentInChildren<T>(bool) , Component.GetComponentInChildren<T>() , Component.GetComponentsInChildren(Type, bool) , Component.GetComponentsInChildren(Type) , Component.GetComponentsInChildren<T>(bool) , Component.GetComponentsInChildren<T>(bool, List<T>) , Component.GetComponentsInChildren<T>() , Component.GetComponentsInChildren<T>(List<T>) , Component.GetComponentInParent(Type, bool) , Component.GetComponentInParent(Type) , Component.GetComponentInParent<T>(bool) , Component.GetComponentInParent<T>() , Component.GetComponentsInParent(Type, bool) , Component.GetComponentsInParent(Type) , Component.GetComponentsInParent<T>(bool) , Component.GetComponentsInParent<T>(bool, List<T>) , Component.GetComponentsInParent<T>() , Component.GetComponents(Type) , Component.GetComponents(Type, List<Component>) , Component.GetComponents<T>(List<T>) , Component.GetComponents<T>() , Component.GetComponentIndex() , Component.CompareTag(string) ,

Component.SendMessageUpwards(string, object, SendMessageOptions) , Component.SendMessageUpwards(string, object) , Component.SendMessageUpwards(string) , Component.SendMessageUpwards(string, SendMessageOptions) , Component.SendMessage(string, object) , Component.SendMessage(string) , Component.SendMessage(string, object, SendMessageOptions) , Component.SendMessage(string, SendMessageOptions) , Component.BroadcastMessage(string, object, SendMessageOptions) , Component.BroadcastMessage(string, object) , Component.BroadcastMessage(string) , Component.BroadcastMessage(string, SendMessageOptions) , Component.transform , Component.gameObject , Component.tag , Object.GetInstanceID() , Object.GetHashCode() , Object.Equals(object) , Object.InstantiateAsync<T>(T) , Object.InstantiateAsync<T>(T, Transform) , Object.InstantiateAsync<T>(T, Vector3, Quaternion) , Object.InstantiateAsync<T>(T, Transform, Vector3, Quaternion) , Object.InstantiateAsync<T>(T, int) , Object.InstantiateAsync<T>(T, int, Transform) , Object.InstantiateAsync<T>(T, int, Vector3, Quaternion) , Object.InstantiateAsync<T>(T, int, ReadOnlySpan<Vector3>, ReadOnlySpan<Quaternion>) , Object.InstantiateAsync<T>(T, int, Transform, Vector3, Quaternion) , Object.InstantiateAsync<T>(T, int, Transform, ReadOnlySpan<Vector3>, ReadOnlySpan<Quaternion>) , Object.Instantiate(Object, Vector3, Quaternion) , Object.Instantiate(Object, Vector3, Quaternion, Transform) , Object.Instantiate(Object) , Object.Instantiate(Object, Scene) , Object.Instantiate(Object, Transform) , Object.Instantiate(Object, Transform, bool) , Object.Instantiate<T>(T) , Object.Instantiate<T>(T, Vector3, Quaternion) , Object.Instantiate<T>(T, Vector3, Quaternion, Transform) , Object.Instantiate<T>(T, Transform) , Object.Instantiate<T>(T, Transform, bool) , Object.Destroy(Object, float) , Object.Destroy(Object) , Object.DestroyImmediate(Object, bool) , Object.DestroyImmediate(Object) , Object.FindObjectsOfType(Type) , Object.FindObjectsOfType(Type, bool) , Object.FindObjectsByType(Type, FindObjectsSortMode) , Object.FindObjectsByType(Type, FindObjectsInactive, FindObjectsSortMode) , Object.DontDestroyOnLoad(Object) , Object.DestroyObject(Object, float) , Object.DestroyObject(Object) , Object.FindSceneObjectsOfType(Type) , Object.FindObjectsOfTypeIncludingAssets(Type) , Object.FindObjectsOfType<T>() , Object.FindObjectsByType<T>(FindObjectsSortMode) , Object.FindObjectsOfType<T>(bool) , Object.FindObjectsByType<T>(FindObjectsInactive, FindObjectsSortMode) , Object.FindObjectOfType<T>() , Object.FindObjectOfType<T>(bool) , Object.FindFirstObjectByType<T>() , Object.FindAnyObjectByType<T>() , Object.FindFirstObjectByType<T>(FindObjectsInactive) , Object.FindAnyObjectByType<T>(FindObjectsInactive) , Object.FindObjectsOfTypeAll(Type) , Object.FindObjectOfType(Type) , Object.FindFirstObjectByType(Type) , Object.FindAnyObjectByType(Type) , Object.FindObjectOfType(Type, bool) ,

Object.FindFirstObjectByType(Type, FindObjectsInactive) , Object.FindAnyObjectByType(Type, FindObjectsInactive) , Object.ToString() , Object.name , Object.hideFlags , object.Equals(object, object) , object.GetType() , object.MemberwiseClone() , object.ReferenceEquals(object, object)

Properties

Smri

Returns this ISnapshots SMRI

```
public uint Smri { get; }
```

Property Value

uint

Methods

AddWeapon(Weapon)

Adds the passed weapon in the inventory

```
public void AddWeapon(Weapon _weapon)
```

Parameters

`_weapon` Weapon

The weapon to add

CacheModel()

Dynamically called when its time to save

```
public void CacheModel()
```

ConstructModel()

Returns an ISnapshotModel with the inventory needed data.

```
public ISnapshotModel ConstructModel()
```

Returns

ISnapshotModel

GetSnapshotModelType()

Returns the type of the ISnapshotModel this ISnapshot's data get represented.

```
public Type GetSnapshotModelType()
```

Returns

Type

LoadModel(ISnapshotModel)

Sets the playe fields from the incoming deserialized model

```
public void LoadModel(ISnapshotModel _model)
```

Parameters

`_model` ISnapshotModel

SInventory model containing the deserialized data

RegisterToSaveManager()

Register the inventory to the save manager and set its SMRI

```
public void RegisterToSaveManager()
```

RetrieveReferences(int[])

Sets any reference the inventory may have, like its weapons.

```
public void RetrieveReferences(int[] _refSmris)
```

Parameters

`_refSmris` int[]

UnregisterToSaveManager()

Unregisters the reference from the save manager

```
public void UnregisterToSaveManager()
```

Class Player

Namespace: ProposedArchitecture

Assembly: com.mad.snapshot.dll

```
public class Player : MonoBehaviour, ISnapshot
```

Inheritance

object ← Object ← Component ← Behaviour ← MonoBehaviour ← Player

Implements

ISnapshot

Inherited Members

MonoBehaviour.IsInvoking() , MonoBehaviour.CancelInvoke() , MonoBehaviour.Invoke(string, float) , MonoBehaviour.InvokeRepeating(string, float, float) , MonoBehaviour.CancelInvoke(string) , MonoBehaviour.IsInvoking(string) , MonoBehaviour.StartCoroutine(string) , MonoBehaviour.StartCoroutine(string, object) , MonoBehaviour.StartCoroutine(IEnumerator) , MonoBehaviour.StartCoroutine_Auto(IEnumerator) , MonoBehaviour.StopCoroutine(IEnumerator) , MonoBehaviour.StopCoroutine(Coroutine) , MonoBehaviour.StopCoroutine(string) , MonoBehaviour.StopAllCoroutines() , MonoBehaviour.print(object) , MonoBehaviour.destroyCancellationToken , MonoBehaviour.useGUILayout , MonoBehaviour.runInEditMode , Behaviour.enabled , Behaviour.isActiveAndEnabled , Component.GetComponent(Type) , Component.GetComponent<T>() , Component.TryGetComponent(Type, out Component) , Component.TryGetComponent<T>(out T) , Component.GetComponent(string) , Component.GetComponentInChildren(Type, bool) , Component.GetComponentInChildren(Type) , Component.GetComponentInChildren<T>(bool) , Component.GetComponentInChildren<T>() , Component.GetComponentsInChildren(Type, bool) , Component.GetComponentsInChildren(Type) , Component.GetComponentsInChildren<T>(bool) , Component.GetComponentsInChildren<T>(bool, List<T>) , Component.GetComponentsInChildren<T>() , Component.GetComponentsInChildren<T>(List<T>) , Component.GetComponentInParent(Type, bool) , Component.GetComponentInParent(Type) , Component.GetComponentInParent<T>(bool) , Component.GetComponentInParent<T>() , Component.GetComponentsInParent(Type, bool) , Component.GetComponentsInParent(Type) , Component.GetComponentsInParent<T>(bool) , Component.GetComponentsInParent<T>(bool, List<T>) , Component.GetComponentsInParent<T>() , Component.GetComponents(Type) , Component.GetComponents(Type, List<Component>) , Component.GetComponents<T>(List<T>) , Component.GetComponents<T>() , Component.GetComponentIndex() , Component.CompareTag(string) ,

Component.SendMessageUpwards(string, object, SendMessageOptions) , Component.SendMessageUpwards(string, object) , Component.SendMessageUpwards(string) , Component.SendMessageUpwards(string, SendMessageOptions) , Component.SendMessage(string, object) , Component.SendMessage(string) , Component.SendMessage(string, object, SendMessageOptions) , Component.SendMessage(string, SendMessageOptions) , Component.BroadcastMessage(string, object, SendMessageOptions) , Component.BroadcastMessage(string, object) , Component.BroadcastMessage(string) , Component.BroadcastMessage(string, SendMessageOptions) , Component.transform , Component.gameObject , Component.tag , Object.GetInstanceID() , Object.GetHashCode() , Object.Equals(object) , Object.InstantiateAsync<T>(T) , Object.InstantiateAsync<T>(T, Transform) , Object.InstantiateAsync<T>(T, Vector3, Quaternion) , Object.InstantiateAsync<T>(T, Transform, Vector3, Quaternion) , Object.InstantiateAsync<T>(T, int) , Object.InstantiateAsync<T>(T, int, Transform) , Object.InstantiateAsync<T>(T, int, Vector3, Quaternion) , Object.InstantiateAsync<T>(T, int, ReadOnlySpan<Vector3>, ReadOnlySpan<Quaternion>) , Object.InstantiateAsync<T>(T, int, Transform, Vector3, Quaternion) , Object.InstantiateAsync<T>(T, int, Transform, ReadOnlySpan<Vector3>, ReadOnlySpan<Quaternion>) , Object.Instantiate(Object, Vector3, Quaternion) , Object.Instantiate(Object, Vector3, Quaternion, Transform) , Object.Instantiate(Object) , Object.Instantiate(Object, Scene) , Object.Instantiate(Object, Transform) , Object.Instantiate(Object, Transform, bool) , Object.Instantiate<T>(T) , Object.Instantiate<T>(T, Vector3, Quaternion) , Object.Instantiate<T>(T, Vector3, Quaternion, Transform) , Object.Instantiate<T>(T, Transform) , Object.Instantiate<T>(T, Transform, bool) , Object.Destroy(Object, float) , Object.Destroy(Object) , Object.DestroyImmediate(Object, bool) , Object.DestroyImmediate(Object) , Object.FindObjectsOfType(Type) , Object.FindObjectsOfType(Type, bool) , Object.FindObjectsByType(Type, FindObjectsSortMode) , Object.FindObjectsByType(Type, FindObjectsInactive, FindObjectsSortMode) , Object.DontDestroyOnLoad(Object) , Object.DestroyObject(Object, float) , Object.DestroyObject(Object) , Object.FindSceneObjectsOfType(Type) , Object.FindObjectsOfTypeIncludingAssets(Type) , Object.FindObjectsOfType<T>() , Object.FindObjectsByType<T>(FindObjectsSortMode) , Object.FindObjectsOfType<T>(bool) , Object.FindObjectsByType<T>(FindObjectsInactive, FindObjectsSortMode) , Object.FindObjectOfType<T>() , Object.FindObjectOfType<T>(bool) , Object.FindFirstObjectByType<T>() , Object.FindAnyObjectByType<T>() , Object.FindFirstObjectByType<T>(FindObjectsInactive) , Object.FindAnyObjectByType<T>(FindObjectsInactive) , Object.FindObjectsOfTypeAll(Type) , Object.FindObjectOfType(Type) , Object.FindFirstObjectByType(Type) , Object.FindAnyObjectByType(Type) , Object.FindObjectOfType(Type, bool) ,

Object.FindFirstObjectByType(Type, FindObjectsInactive) , Object.FindAnyObjectByType(Type, FindObjectsInactive) , Object.ToString() , Object.name , Object.hideFlags , object.Equals(object, object) , object.GetType() , object.MemberwiseClone() , object.ReferenceEquals(object, object)

Properties

Smri

Returns this ISnapshots SMRI

```
public uint Smri { get; }
```

Property Value

uint

Methods

CacheModel()

Dynamically called when its time to save

```
public void CacheModel()
```

ConstructModel()

Returns an ISnapshotModel with the player needed data.

```
public ISnapshotModel ConstructModel()
```

Returns

ISnapshotModel

GetSnapshotModelType()

Returns the type of the ISnapshotModel this ISnapshot's data get represented.

```
public Type GetSnapshotModelType()
```

Returns

Type

LoadModel(ISnapshotModel)

Sets the player fields from the incoming deserialized model

```
public void LoadModel(ISnapshotModel _model)
```

Parameters

`_model` ISnapshotModel

SPlayer model containing the deserialized data

RegisterToSaveManager()

Register the player to the save manager and set its SMRI

```
public void RegisterToSaveManager()
```

RetrieveReferences(int[])

Sets any reference the player may have, like its inventory.

```
public void RetrieveReferences(int[] _refSmris)
```

Parameters

_refSmris int[]

UnregisterToSaveManager()

Unregisters the reference from the save manager

```
public void UnregisterToSaveManager()
```

Struct SInventory

Namespace: ProposedArchitecture

Assembly: com.mad.snapshot.dll

```
[MessagePackObject(false)]
public struct SInventory : ISnapshotModel
```

Implements

ISnapshotModel

Inherited Members

ValueType.Equals(object) , ValueType.GetHashCode() , ValueType.ToString() , object.Equals(object, object) , object.GetType() , object.ReferenceEquals(object, object)

Fields

_MaxItems

```
[Key(2)]
public int _MaxItems
```

Field Value

int

_Position

```
[Key(3)]
public Vector3 _Position
```

Field Value

Vector3

_Rotation

```
[Key(4)]
public Quaternion _Rotation
```

Field Value

Quaternion

Properties

RefSmris

The class/struct should have an int array to store its references SMRIs

```
[Key(1)]
public int[] RefSmris { readonly get; set; }
```

Property Value

int[]

Smri

The class/struct should have an SMRI field

```
[Key(0)]
public uint Smri { readonly get; set; }
```

Property Value

uint

Struct SPlayer

Namespace: ProposedArchitecture

Assembly: com.mad.snapshot.dll

```
[MessagePackObject(false)]
public struct SPlayer : ISnapshotModel
```

Implements

ISnapshotModel

Inherited Members

ValueType.Equals(object) , ValueType.GetHashCode() , ValueType.ToString() , object.Equals(object, object) , object.GetType() , object.ReferenceEquals(object, object)

Fields

_Health

```
[Key(2)]
public float _Health
```

Field Value

float

_IsAlive

```
[Key(5)]
public bool _IsAlive
```

Field Value

bool

_Position

```
[Key(6)]
public Vector3 _Position
```

Field Value

Vector3

_Rotation

```
[Key(7)]
public Quaternion _Rotation
```

Field Value

Quaternion

_Shield

```
[Key(4)]
public float _Shield
```

Field Value

float

_Stamina

```
[Key(3)]
public float _Stamina
```

Field Value

float

Properties

RefSmris

The class/struct should have an int array to store its references SMRIs

```
[Key(1)]
public int[] RefSmris { readonly get; set; }
```

Property Value

int[]

Smri

The class/struct should have an SMRI field

```
[Key(0)]
public uint Smri { readonly get; set; }
```

Property Value

uint

Struct SWeapon

Namespace: ProposedArchitecture

Assembly: com.mad.snapshot.dll

```
[MessagePackObject(false)]
public struct SWeapon : ISnapshotModel
```

Implements
ISnapshotModel

Inherited Members
ValueType.Equals(object) , ValueType.GetHashCode() , ValueType.ToString() , object.Equals(object, object) , object.GetType() , object.ReferenceEquals(object, object)

Fields

_Ammo

```
[Key(2)]
public int _Ammo
```

Field Value

int

_Loaded

```
[Key(3)]
public bool _Loaded
```

Field Value

bool

_Position

```
[Key(4)]
public Vector3 _Position
```

Field Value

Vector3

_Rotation

```
[Key(5)]
public Quaternion _Rotation
```

Field Value

Quaternion

Properties

RefSmris

The class/struct should have an int array to store its references SMRIs

```
[Key(1)]
public int[] RefSmris { readonly get; set; }
```

Property Value

int[]

Smri

The class/struct should have an SMRI field

```
[Key(0)]
public uint Smri { readonly get; set; }
```

Property Value

uint

Class SaveManager

Namespace: ProposedArchitecture

Assembly: com.mad.snapshot.dll

Responsible for handling the SnapshotWrapper, ISnapshot and ISnapshotModel instances. Hands out SMRIs.

```
public class SaveManager
```

Inheritance

object ← SaveManager

Inherited Members

object.Equals(object) , object.Equals(object, object) , object.GetHashCode() , object.GetType() , object.MemberwiseClone() , object.ReferenceEquals(object, object) , object.ToString()

Constructors

SaveManager(Common)

Creates a SaveManager instance

```
public SaveManager(Common _common)
```

Parameters

`_common` Common

Reference to the Common instance

Properties

Snapshots

Returns a read only collection of the Snapshot reference cache.

```
public IReadOnlyList<ISnapshot> Snapshots { get; }
```

Property Value

IReadOnlyList<ISnapshot>

Methods

CacheModel(ISnapshotModel)

Stores the passed model to the SaveManager data container list.

```
public void CacheModel(ISnapshotModel _model)
```

Parameters

_model ISnapshotModel

The snapshot data container instance

Cleanup()

Resets the dll library caches and SMRI.

```
public bool Cleanup()
```

Returns

bool

LoadSaveFile(string)

Kicks off the Unpacking mechanism contained in the passed fileName. The deserialized data are stored inside the SaveManager ISnapshotModel cache for accessing. Each cached ISnapshot.LoadModel and ISnapshot.RetrieveReferences method gets called after each data retrieval from the dll cache.

```
public void LoadSaveFile(string _fileName)
```

Parameters

_fileName string

RegisterModel(ISnapshot)

Registers the passed ISnapshot instance to the serialization event handler and adds it to the ISnapshot reference list.

```
public uint RegisterModel(ISnapshot _snapshot)
```

Parameters

_snapshot ISnapshot

The snapshot instance

Returns

uint

The SMRI of the registered model.

Save()

Kicks off the packing sequence. All the cached ISnapshot.CacheData methods get called and their data are serialized and passed to the internal DLL library cache. The cached SaveManager models list gets cleared afterwards.

```
public void Save()
```

UnregisterFromSnapshot(ISnapshot)

Unregisters the passed ISnapshot from data caching upon packing. The passed snapshot is also removed from the Snapshot list.

```
public void UnregisterFromSnapshot(ISnapshot _snapshot)
```

Parameters

`_snapshot` ISnapshot

Class Weapon

Namespace: ProposedArchitecture

Assembly: com.mad.snapshot.dll

```
public class Weapon : MonoBehaviour, ISnapshot
```

Inheritance

object ← Object ← Component ← Behaviour ← MonoBehaviour ← Weapon

Implements

ISnapshot

Inherited Members

MonoBehaviour.IsInvoking() , MonoBehaviour.CancelInvoke() , MonoBehaviour.Invoke(string, float) , MonoBehaviour.InvokeRepeating(string, float, float) , MonoBehaviour.CancelInvoke(string) , MonoBehaviour.IsInvoking(string) , MonoBehaviour.StartCoroutine(string) , MonoBehaviour.StartCoroutine(string, object) , MonoBehaviour.StartCoroutine(IEnumerator) , MonoBehaviour.StartCoroutine_Auto(IEnumerator) , MonoBehaviour.StopCoroutine(IEnumerator) , MonoBehaviour.StopCoroutine(Coroutine) , MonoBehaviour.StopCoroutine(string) , MonoBehaviour.StopAllCoroutines() , MonoBehaviour.print(object) , MonoBehaviour.destroyCancellationToken , MonoBehaviour.useGUILayout , MonoBehaviour.runInEditMode , Behaviour.enabled , Behaviour.isActiveAndEnabled , Component.GetComponent(Type) , Component.GetComponent<T>() , Component.TryGetComponent(Type, out Component) , Component.TryGetComponent<T>(out T) , Component.GetComponent(string) , Component.GetComponentInChildren(Type, bool) , Component.GetComponentInChildren(Type) , Component.GetComponentInChildren<T>(bool) , Component.GetComponentInChildren<T>() , Component.GetComponentsInChildren(Type, bool) , Component.GetComponentsInChildren(Type) , Component.GetComponentsInChildren<T>(bool) , Component.GetComponentsInChildren<T>(bool, List<T>) , Component.GetComponentsInChildren<T>() , Component.GetComponentsInChildren<T>(List<T>) , Component.GetComponentInParent(Type, bool) , Component.GetComponentInParent(Type) , Component.GetComponentInParent<T>(bool) , Component.GetComponentInParent<T>() , Component.GetComponentsInParent(Type, bool) , Component.GetComponentsInParent(Type) , Component.GetComponentsInParent<T>(bool) , Component.GetComponentsInParent<T>(bool, List<T>) , Component.GetComponentsInParent<T>() , Component.GetComponents(Type) , Component.GetComponents(Type, List<Component>) , Component.GetComponents<T>(List<T>) , Component.GetComponents<T>() , Component.GetComponentIndex() , Component.CompareTag(string) ,

Component.SendMessageUpwards(string, object, SendMessageOptions) , Component.SendMessageUpwards(string, object) , Component.SendMessageUpwards(string) , Component.SendMessageUpwards(string, SendMessageOptions) , Component.SendMessage(string, object) , Component.SendMessage(string) , Component.SendMessage(string, object, SendMessageOptions) , Component.SendMessage(string, SendMessageOptions) , Component.BroadcastMessage(string, object, SendMessageOptions) , Component.BroadcastMessage(string, object) , Component.BroadcastMessage(string) , Component.BroadcastMessage(string, SendMessageOptions) , Component.transform , Component.gameObject , Component.tag , Object.GetInstanceID() , Object.GetHashCode() , Object.Equals(object) , Object.InstantiateAsync<T>(T) , Object.InstantiateAsync<T>(T, Transform) , Object.InstantiateAsync<T>(T, Vector3, Quaternion) , Object.InstantiateAsync<T>(T, Transform, Vector3, Quaternion) , Object.InstantiateAsync<T>(T, int) , Object.InstantiateAsync<T>(T, int, Transform) , Object.InstantiateAsync<T>(T, int, Vector3, Quaternion) , Object.InstantiateAsync<T>(T, int, ReadOnlySpan<Vector3>, ReadOnlySpan<Quaternion>) , Object.InstantiateAsync<T>(T, int, Transform, Vector3, Quaternion) , Object.InstantiateAsync<T>(T, int, Transform, ReadOnlySpan<Vector3>, ReadOnlySpan<Quaternion>) , Object.Instantiate(Object, Vector3, Quaternion) , Object.Instantiate(Object, Vector3, Quaternion, Transform) , Object.Instantiate(Object) , Object.Instantiate(Object, Scene) , Object.Instantiate(Object, Transform) , Object.Instantiate(Object, Transform, bool) , Object.Instantiate<T>(T) , Object.Instantiate<T>(T, Vector3, Quaternion) , Object.Instantiate<T>(T, Vector3, Quaternion, Transform) , Object.Instantiate<T>(T, Transform) , Object.Instantiate<T>(T, Transform, bool) , Object.Destroy(Object, float) , Object.Destroy(Object) , Object.DestroyImmediate(Object, bool) , Object.DestroyImmediate(Object) , Object.FindObjectsOfType(Type) , Object.FindObjectsOfType(Type, bool) , Object.FindObjectsByType(Type, FindObjectsSortMode) , Object.FindObjectsByType(Type, FindObjectsInactive, FindObjectsSortMode) , Object.DontDestroyOnLoad(Object) , Object.DestroyObject(Object, float) , Object.DestroyObject(Object) , Object.FindSceneObjectsOfType(Type) , Object.FindObjectsOfTypeIncludingAssets(Type) , Object.FindObjectsOfType<T>() , Object.FindObjectsByType<T>(FindObjectsSortMode) , Object.FindObjectsOfType<T>(bool) , Object.FindObjectsByType<T>(FindObjectsInactive, FindObjectsSortMode) , Object.FindObjectOfType<T>() , Object.FindObjectOfType<T>(bool) , Object.FindFirstObjectByType<T>() , Object.FindAnyObjectByType<T>() , Object.FindFirstObjectByType<T>(FindObjectsInactive) , Object.FindAnyObjectByType<T>(FindObjectsInactive) , Object.FindObjectsOfTypeAll(Type) , Object.FindObjectOfType(Type) , Object.FindFirstObjectByType(Type) , Object.FindAnyObjectByType(Type) , Object.FindObjectOfType(Type, bool) ,

Object.FindFirstObjectByType(Type, FindObjectsInactive) , Object.FindAnyObjectByType(Type, FindObjectsInactive) , Object.ToString() , Object.name , Object.hideFlags , object.Equals(object, object) , object.GetType() , object.MemberwiseClone() , object.ReferenceEquals(object, object)

Properties

Smri

Returns this ISnapshots SMRI

```
public uint Smri { get; }
```

Property Value

uint

Methods

CacheModel()

Dynamically called when its time to save

```
public void CacheModel()
```

ConstructModel()

Returns an ISnapshotModel with the player needed data.

```
public ISnapshotModel ConstructModel()
```

Returns

ISnapshotModel

GetSnapshotModelType()

Returns the type of the ISnapshotModel this ISnapshot's data get represented.

```
public Type GetSnapshotModelType()
```

Returns

Type

LoadModel(ISnapshotModel)

Sets the weapon fields from the incoming deserialized model

```
public void LoadModel(ISnapshotModel _model)
```

Parameters

`_model` ISnapshotModel

SWeapon model containing the deserialized data

RegisterToSaveManager()

Register the weapon to the save manager and set its SMRI

```
public void RegisterToSaveManager()
```

RetrieveReferences(int[])

Sets any reference the weapon may have, like its inventory.

```
public void RetrieveReferences(int[] _refSmris)
```

Parameters

_refSmris int[]

SetInventory(Inventory)

Sets the inventory this weapon belongs to.

```
public void SetInventory(Inventory _inventory)
```

Parameters

_inventory Inventory

The inventory reference

UnregisterToSaveManager()

Unregisters the reference from the save manager

```
public void UnregisterToSaveManager()
```

Class WorldLoader

Namespace: ProposedArchitecture

Assembly: com.mad.snapshot.dll

Handles the world creation and order of SMRIs simultaneously.

```
[DefaultExecutionOrder(-250)]
public class WorldLoader : MonoBehaviour
```

Inheritance

object ← Object ← Component ← Behaviour ← MonoBehaviour ← WorldLoader

Inherited Members

MonoBehaviour.IsInvoking() , MonoBehaviour.CancelInvoke() , MonoBehaviour.Invoke(string, float) , MonoBehaviour.InvokeRepeating(string, float, float) , MonoBehaviour.CancelInvoke(string) , MonoBehaviour.IsInvoking(string) , MonoBehaviour.StartCoroutine(string) , MonoBehaviour.StartCoroutine(string, object) , MonoBehaviour.StartCoroutine(IEnumerator) , MonoBehaviour.StartCoroutine_Auto(IEnumerator) , MonoBehaviour.StopCoroutine(IEnumerator) , MonoBehaviour.StopCoroutine(Coroutine) , MonoBehaviour.StopCoroutine(string) , MonoBehaviour.StopAllCoroutines() , MonoBehaviour.print(object) , MonoBehaviour.destroyCancellationToken , MonoBehaviour.useGUILayout , MonoBehaviour.runInEditMode , Behaviour.enabled , Behaviour.isActiveAndEnabled , Component.GetComponent(Type) , Component.GetComponent<T>() , Component.TryGetComponent(Type, out Component) , Component.TryGetComponent<T>(out T) , Component.GetComponent(string) , Component.GetComponentInChildren(Type, bool) , Component.GetComponentInChildren(Type) , Component.GetComponentInChildren<T>(bool) , Component.GetComponentInChildren<T>() , Component.GetComponentsInChildren(Type, bool) , Component.GetComponentsInChildren(Type) , Component.GetComponentsInChildren<T>(bool) , Component.GetComponentsInChildren<T>(bool, List<T>) , Component.GetComponentsInChildren<T>() , Component.GetComponentsInChildren<T>(List<T>) , Component.GetComponentInParent(Type, bool) , Component.GetComponentInParent(Type) , Component.GetComponentInParent<T>(bool) , Component.GetComponentInParent<T>() , Component.GetComponentsInParent(Type, bool) , Component.GetComponentsInParent(Type) , Component.GetComponentsInParent<T>(bool) , Component.GetComponentsInParent<T>(bool, List<T>) , Component.GetComponentsInParent<T>() , Component.GetComponents(Type) , Component.GetComponents(Type, List<Component>) , Component.GetComponents<T>(List<T>) , Component.GetComponents<T>() , Component.GetComponentIndex() , Component.CompareTag(string) ,

Component.SendMessageUpwards(string, object, SendMessageOptions) , Component.SendMessageUpwards(string, object) , Component.SendMessageUpwards(string) , Component.SendMessageUpwards(string, SendMessageOptions) , Component.SendMessage(string, object) , Component.SendMessage(string) , Component.SendMessage(string, object, SendMessageOptions) , Component.SendMessage(string, SendMessageOptions) , Component.BroadcastMessage(string, object, SendMessageOptions) , Component.BroadcastMessage(string, object) , Component.BroadcastMessage(string) , Component.BroadcastMessage(string, SendMessageOptions) , Component.transform , Component.gameObject , Component.tag , Object.GetInstanceID() , Object.GetHashCode() , Object.Equals(object) , Object.InstantiateAsync<T>(T) , Object.InstantiateAsync<T>(T, Transform) , Object.InstantiateAsync<T>(T, Vector3, Quaternion) , Object.InstantiateAsync<T>(T, Transform, Vector3, Quaternion) , Object.InstantiateAsync<T>(T, int) , Object.InstantiateAsync<T>(T, int, Transform) , Object.InstantiateAsync<T>(T, int, Vector3, Quaternion) , Object.InstantiateAsync<T>(T, int, ReadOnlySpan<Vector3>, ReadOnlySpan<Quaternion>) , Object.InstantiateAsync<T>(T, int, Transform, Vector3, Quaternion) , Object.InstantiateAsync<T>(T, int, Transform, ReadOnlySpan<Vector3>, ReadOnlySpan<Quaternion>) , Object.Instantiate(Object, Vector3, Quaternion) , Object.Instantiate(Object, Vector3, Quaternion, Transform) , Object.Instantiate(Object) , Object.Instantiate(Object, Scene) , Object.Instantiate(Object, Transform) , Object.Instantiate(Object, Transform, bool) , Object.Instantiate<T>(T) , Object.Instantiate<T>(T, Vector3, Quaternion) , Object.Instantiate<T>(T, Vector3, Quaternion, Transform) , Object.Instantiate<T>(T, Transform) , Object.Instantiate<T>(T, Transform, bool) , Object.Destroy(Object, float) , Object.Destroy(Object) , Object.DestroyImmediate(Object, bool) , Object.DestroyImmediate(Object) , Object.FindObjectsOfType(Type) , Object.FindObjectsOfType(Type, bool) , Object.FindObjectsByType(Type, FindObjectsSortMode) , Object.FindObjectsByType(Type, FindObjectsInactive, FindObjectsSortMode) , Object.DontDestroyOnLoad(Object) , Object.DestroyObject(Object, float) , Object.DestroyObject(Object) , Object.FindSceneObjectsOfType(Type) , Object.FindObjectsOfTypeIncludingAssets(Type) , Object.FindObjectsOfType<T>() , Object.FindObjectsByType<T>(FindObjectsSortMode) , Object.FindObjectsOfType<T>(bool) , Object.FindObjectsByType<T>(FindObjectsInactive, FindObjectsSortMode) , Object.FindObjectOfType<T>() , Object.FindObjectOfType<T>(bool) , Object.FindFirstObjectByType<T>() , Object.FindAnyObjectByType<T>() , Object.FindFirstObjectByType<T>(FindObjectsInactive) , Object.FindAnyObjectByType<T>(FindObjectsInactive) , Object.FindObjectsOfTypeAll(Type) , Object.FindObjectOfType(Type) , Object.FindFirstObjectByType(Type) , Object.FindAnyObjectByType(Type) , Object.FindObjectOfType(Type, bool) ,

Object.FindFirstObjectByType(Type, FindObjectsInactive) , Object.FindAnyObjectByType(Type, FindObjectsInactive) , Object.ToString() , Object.name , Object.hideFlags , object.Equals(object, object) , object.GetType() , object.MemberwiseClone() , object.ReferenceEquals(object, object)

Properties

FromLoad

Is the start-up a load procedure?

```
public bool FromLoad { get; }
```

Property Value

bool

Namespace Snapshot

Classes

SnapshotWrapper

C# library wrapper of SnapshotLib x64-bit dll.

Class SnapshotWrapper

Namespace: Snapshot

Assembly: com.mad.snapshot.dll

C# library wrapper of SnapshotLib x64-bit dll.

```
public static class SnapshotWrapper
```

Inheritance

object ← SnapshotWrapper

Inherited Members

object.Equals(object) , object.Equals(object, object) , object.GetHashCode() , object.GetType() , object.MemberwiseClone() , object.ReferenceEquals(object, object) , object.ToString()

Methods

CacheData(uint, byte[], int[])

Caches the passed data and references SMRIs inside the dll cache. Values are copies so it's safe to also delete them if you want.

```
public static bool CacheData(uint _smri, byte[] _data, int[] _refSmris)
```

Parameters

`_smri` uint

The SMRI to associate the data array to

`_data` byte[]

The data to copy over to the dll

`_refSmris` int[]

The references SMRI this SMRI needs.

Returns

bool

True if the caching was successful, false otherwise.

DecreaseSmri()

Decreases the global SMRI by 1. Use when GetSmri() fails.

```
public static void DecreaseSmri()
```

Exceptions

Exception

Could not decrease SMRI from DLL

DeleteSmriData(uint)

Deletes the data associated with the passed SMRI inside the dll.

```
public static bool DeleteSmriData(uint _smri)
```

Parameters

`_smri` uint

The SMRI to delete data from

Returns

bool

True if the deletion was successful, false otherwise.

Exceptions

Exception

Could not delete the smri data

GetCurrentSmri()

Returns the current non-incremented global SMRI from the DLL.

```
public static int GetCurrentSmri()
```

Returns

int

Exceptions

Exception

Could not retrieve current SMRI from DLL

GetData(uint)

Returns the associated byte array of the passed smri from the dll.

```
public static byte[] GetData(uint _smri)
```

Parameters

`_smri` uint

The SMRI to retrieve data for

Returns

byte[]

A byte array containing the deserialized data or null.

GetLoadFileName()

Returns the cached save file name from inside the dll.

```
public static string GetLoadFileName()
```

Returns

string

The saved file name stored in the dll. Can be an empty string.

Exceptions

Exception

Could not get the current load from filename from DLL

GetRefSmris(uint)

Returns an int array containing the referenced SMRI of the passed SMRI from the dll.

```
public static int[] GetRefSmris(uint _parentSmri)
```

Parameters

`_parentSmri` uint

The SMRI to retrieve referenced SMRIs for.

Returns

int[]

A byte array containing the data or null.

GetSavePath()

Returns the absolute save path from inside the dll.

```
public static string GetSavePath()
```

Returns

string

Returns the absolute save path from inside the dll.

Exceptions

Exception

Could not get the current save path from DLL

GetSmri()

Increases and returns the global DLL SMRI used for data storing and reference preservation.

```
public static uint GetSmri()
```

Returns

uint

A uint representing the SMRI in the DLL

Exceptions

Exception

Could not retrieve SMRI from DLL.

PackData()

Starts the packing sequence of the cached data inside the dll.

```
public static bool PackData()
```

Returns

bool

True if packing was successful, false otherwise.

ResetCache()

Deallocates the dll data cache and clears it. Resets the set saved directory value to empty. Resets the set file name value to empty.

```
public static bool ResetCache()
```

Returns

bool

True if the reset was successful, false otherwise.

ResetSmri()

Resets the DLL global SMRI back to its default value: -1.

```
public static bool ResetSmri()
```

Returns

bool

True if the reset was succesful, false otherwise with an error log.

SetLoadFileName(string)

Sets the save file name inside the dll.

```
public static bool SetLoadFileName(string _loadFromFileName)
```

Parameters

`_loadFromFileName` string

The save file name to unpack from.

Returns

bool

True if set was successful, false otherwise.

SetSavePath(string)

Sets the save path inside the dll.

```
public static bool SetSavePath(string _path)
```

Parameters

`_path` string

The absolute path to the save directory

Returns

bool

True if the set was successful, false otherwise.

UnpackData()

Starts the unpacking sequence inside the dll to deserialize the serialized data and store them in the dll cache. GlobalSMRI is set to be equal to the unpacked data size. Cached datas are overwritten.

```
public static bool UnpackData()
```

Returns

bool

True if unpacking was successful, false otherwise.