

# GAME MACHINE

BY

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# 1 Introduction

This Game Machine is a plugin for unreal engine 4.10 and above. We have designed this plugin for designing mission.

## 2 General description

## 3 Specific requirements

## 4 Overview

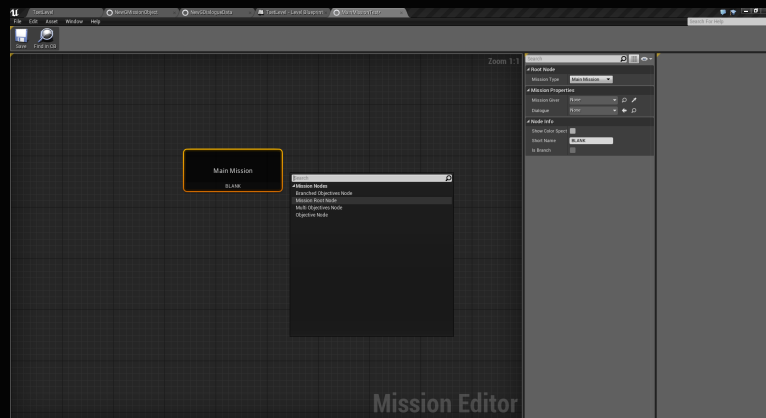
## 5 How to use

### 5.1 overview

In game machine there are two type of graphs mission graph and dialogue graph which will going to give help mission designers to design missions easy and more afficent way.

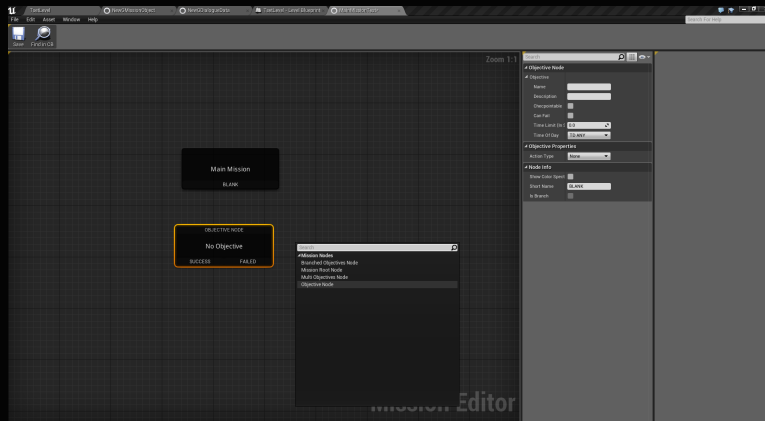
### 5.2 Mission Graph

Mission Graph is the place where we are going to define the flow of our mission and design objectives. Here in mission graph there are four node's Mission-Root-Node, Objective-Node, Branched-Objective-Node, Multi-Objective-Node



#### MISSION ROOT NODE

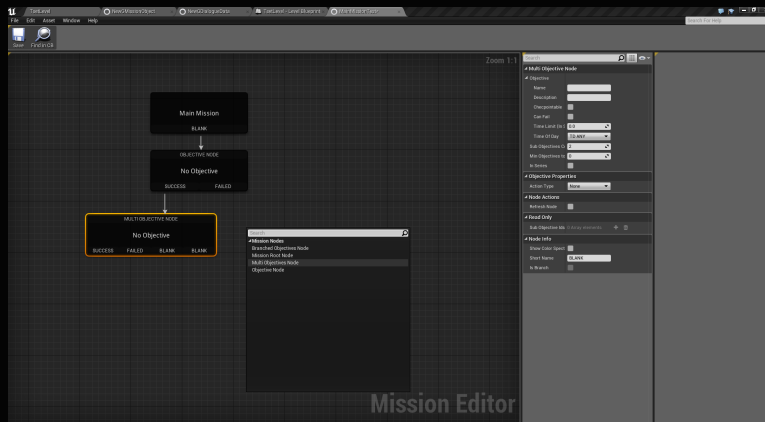
This is the entry node from where our mission will be initialized.



## OBJECTIVE NODE

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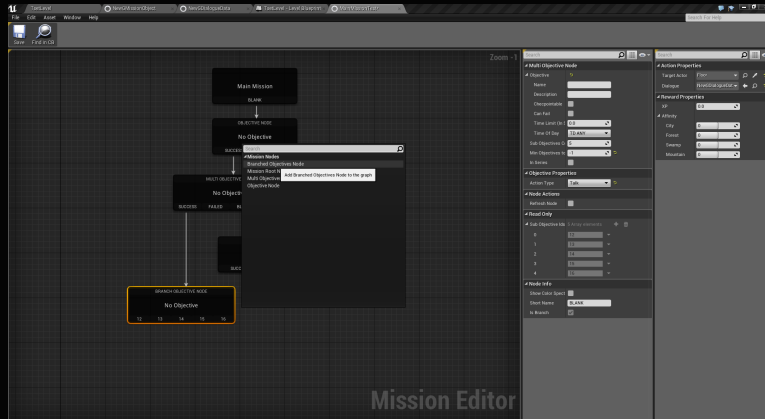
This is the node where we design our objective.



## MULTI OBJECTIVE NODE

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This node same as an objective node but in this node we can design an objective which can have multiple objective.hsa jdja asjdsa sajh sad hjsa hjksad ajhd as sh as sa h a usa uhsa hsa hsa d hsa j sajh sda jsa sai gisa dsagh id iuas d hisda asd gias d iuas dhsa hid huiasduih iuas d asd jsa joas d oiasdiod iojsa



## *BRANCHED OBJECTIVE NODE*

Branched Objective Node is the similar to the Multi Objective Node With slight difference.

### 5.2.1 MISSION ROOT NODE

As we know Mission root node is the initialization node which initialize our mission graph, this node have few properties.

Properties Name(Section)	Properties Description
Mission Type(Root Node)	Main Mission : for main missions Side Mission : for side missions
Mission Giver(Mission Properties)	Actor which is going to give mission or actor form where mission is going to start
Show Color Spectrum(Node Info)	show the nodes color
Short Name(Node Info)	Name of the node
IsBranch(Node Info)	if node is branched

### 5.2.2 OBJECTIVE NODE

this is the node where we describe our missions objective.

Details Panel:-

Properties Name(Section)	Properties Description
Name(Objective Node)	Name of the objective
Description(Objective Node)	What mission is about
Checkpointable(Objective Node)	Is objective is having check point or not
Can Fail(Objective Node)	Objective can fail or not
Time Limit(Objective Node)	Is an Objective having any time limits or not and time is in seconds
Time Of Day(Objective Node)	In which time objective will be accessible (Morning,Noon,Evening,Night)
Action Type(Objective Properties)	Action type of the objective
Show Color Spectrum(Node Info)	show the nodes color
Short Name(Node Info)	Name of the node
IsBranch(Node Info)	if node is branched

Action Panel:-

Properties Name(Section)	Properties Description
Location(Action Properties)	Location of the actor which is going to perform action
Radius(Action Properties)	Radius is the distance according to which action going to execute
XP(Reward Properties)	hsjdfhksdjfhkjshdfkj
Affinity(Reward Properties)	In affinity there are four option which can be manipulated. (City,Forest,Swamp,Mountain)

### 5.2.3 MULTI OBJECTIVE NODE

This is an objective node which can contain multiple objective.

Details Panel:-

Properties Name(Section)	Properties Description
Name(MultiObjectiveNode)	Name of the objective
Description(MultiObjectiveNode)	Description about the objective
Checkpointable(MultiObjectiveNode)	is the objective have check points or not
CanFail(MultiObjectiveNode)	is objective can fail or not
TimeLimit(MultiObjectiveNode)	is the objective have time limit or not and the time limit is in second's
TimeOfDay(MultiObjectiveNode)	In which time of the day objective can be done
SubObjectiveCount(MultiObjectiveNode)	How many sub objective are in this objective node
MinObjectivesToComplete(MultiObjectiveNode)	What is the min no. of objective in total have to be done to complete this objective
InSeries(MultiObjectiveNode)	is the objective have to be done in series or not
ActionType(ObjectiveProperties)	Type of the action which this objective is going to perform
RefresNode(NodeAction)	For refreshing the multi objective node after selecting the action type
SubObjectiveIDs(ReadOnly)	
Show Color Spectrum(Node Info)	show the nodes color
Short Name(Node Info)	Name of the node
IsBranch(Node Info)	if node is branched

If Action Type(Objective Properties) is Move to.

Action Panel:-

Properties Name(Section)	Properties Description
Location(ActionProperties)	Location of the actor where to move
Radius(ActionProperties)	radius is the distance in which an event is going to activate
XP(Reward Properties)	hsjdfhksdjfhkjshdfkj
Affinity(Reward Properties)	In affinity there are four option which can be manipulated. (City,Forest,Swamp,Mountain)

If Action Type(Objective Properties) is Talk.  
Action Panel:-

Properties Name(Section)	Properties Description
TargetActor(ActionProperties)	Actor which is going to speak
Dialogue(ActionProperties)	dialogue of the target actor
XP(Reward Properties)	hsjdfhksdjhfkjshdfkj
Affinity(Reward Properties)	In affinity there are four option which can be manipulated. (City,Forest,Swamp,Mountain)

If Action Type(Objective Properties) is Mind Voice.  
Action Panel:-

Properties Name(Section)	Properties Description
Dialogue(ActionProperties)	Character's dialogue
XP(Reward Properties)	hsjdfhksdjhfkjshdfkj
Affinity(Reward Properties)	In affinity there are four option which can be manipulated. (City,Forest,Swamp,Mountain)



### 5.2.4 BRANCHED OBJECTIVE NODE

Branched Objective Node is the similar to the Multi Objective Node With slight difference.  
Details Panel:-

Properties Name(Section)	Properties Description
Name(MultiObjectiveNode)	Name of the objective
Description(MultiObjectiveNode)	Description about the objective
Checkpointable(MultiObjectiveNode)	is the objective have check points or not
CanFail(MultiObjectiveNode)	is objective can fail or not
TimeLimit(MultiObjectiveNode)	is the objective have time limit or not and the time limit is in second's
TimeOfDay(MultiObjectiveNode)	In which time of the day objective can be done
SubObjectiveCount(MultiObjectiveNode)	How many sub objective are in this objective node
MinObjectivesToComplete(MultiObjectiveNode)	What is the min no. of objective in total have to be done to complete this objective
InSeries(MultiObjectiveNode)	is the objective have to be done in series or not
ActionType(ObjectiveProperties)	Type of the action which this objective is going to perform
RefresNode(NodeAction)	For refreshing the multi objective node after selecting the action type
SubObjectiveIDs(ReadOnly)	
Show Color Spectrum(Node Info)	show the nodes color
Short Name(Node Info)	Name of the node
IsBranch(Node Info)	if node is branched

If Action Type(Objective Properties) is Move to.  
Action Panel:-

Properties Name(Section)	Properties Description
Location(ActionProperties)	Location of the actor where to move
Radius(ActionProperties)	radius is the distance in which an event is going to activate
XP(Reward Properties)	hsjdfhksdjfhkjshdfkj
Affinity(Reward Properties)	In affinity there are four option which can be manipulated. (City,Forest,Swamp,Mountain)

If Action Type(Objective Properties) is Talk.  
Action Panel:-

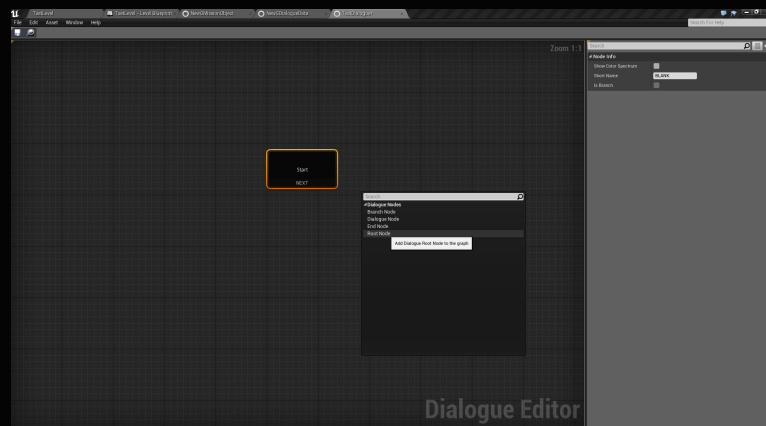
Properties Name(Section)	Properties Description
TargetActor(ActionProperties)	Actor which is going to speak
Dialogue(ActionProperties)	dialogue of the target actor
XP(Reward Properties)	hsjdfhksdjhfkjshdfkj
Affinity(Reward Properties)	In affinity there are four option which can be manipulated. (City,Forest,Swamp,Mountain)

If Action Type(Objective Properties) is Mind Voice.  
Action Panel:-

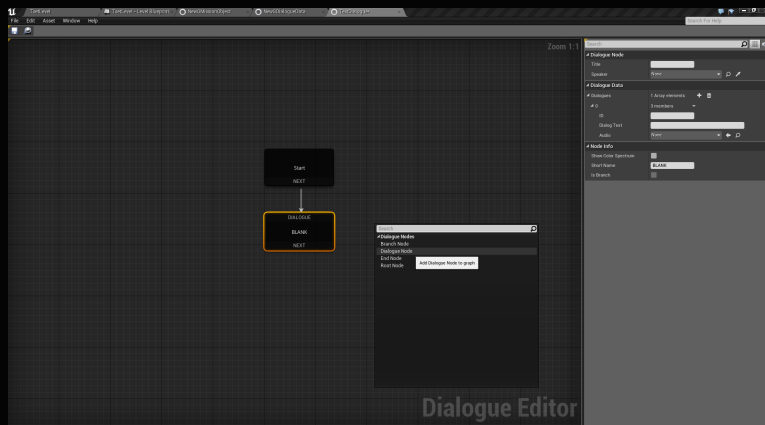
Properties Name(Section)	Properties Description
Dialogue(ActionProperties)	Character's dialogue
XP(Reward Properties)	hsjdfhksdjhfkjshdfkj
Affinity(Reward Properties)	In affinity there are four option which can be manipulated. (City,Forest,Swamp,Mountain)

## 5.3 Dialogue Graph

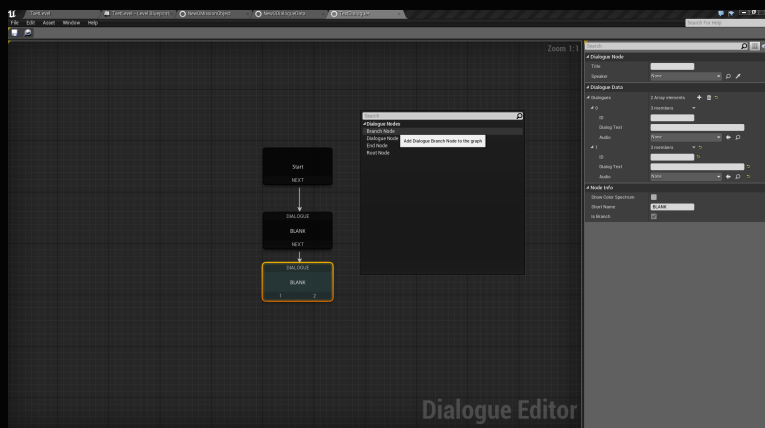
Now in Dialogue graph we are going to design our dialogue's as per the mission graph.In Dialogue graph there are four node's Dialogue Root Node, Dialogue Node, Branch Node and End Node.



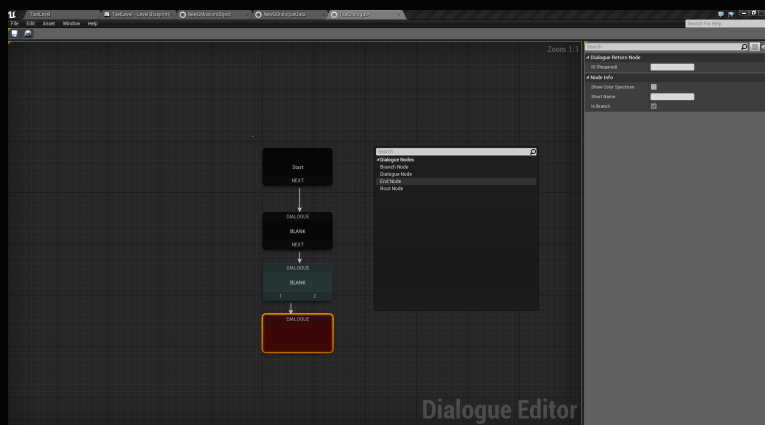
Dialogue Root Node



Dialogue Node



Dialogue Branch Node



Dialogue End Node

### 5.3.1 DIALOGUE ROOT NODE

Root node is the node from where our dialogue graph will going to initialized. Which have very few properties.

Detail Panel:-

Properties Name(Section)	Properties Description
Show Color Spectrum(Node Info)	show the nodes color
Short Name(Node Info)	Name of the node
IsBranch(Node Info)	if node is branched

### 5.3.2 DIALOGUE NODE

This is the node where we going to write dialogue with some properties.

Detail Panel:-

Properties Name(Section)	Properties Description
Title(DialogueNode)	Title of the dialogue
Speaker(DialogueNode)	Speaker of the dialogue
Dialogues(DialogueData)	It is an array and each element of an array contains 3 members ID, Dialogue Text, Audio
Show Color Spectrum(Node Info)	shows the nodes color
Short Name(Node Info)	Name of the node
IsBranch(Node Info)	if node is branched

### 5.3.3 BRANCH NODE

Branch node is similar as dialogue node but in branch it can contain multiple dialogues and can be executed in an any sequence.

Detail Panel:-

Properties Name(Section)	Properties Description
Title(Dialogue Node)	Title of the branch dialogue node
Speaker(Dialogue Node)	Speaker of the dialogue
Dialogue(DialogueData)	Dialogue is an array here in which every element having 3 members(ID, Dialogue Text, Audio)
Show Color Spectrum(Node Info)	show the nodes color
Short Name(Node Info)	Name of the node
IsBranch(Node Info)	if node is branched

### 5.3.4 END NODE

End node is the return node which returns the id of the dialogue node on which the end node is connected to.

Properties Name(Section)	Properties Details
ID(DialogueReturnNode)	it return the id
Show Color Spectrum(Node Info)	show the nodes color
Short Name(Node Info)	Name of the node
IsBranch(Node Info)	if node is branched

## 6 Examples

## 7 Appendix