**Add Constraints (requires enterprise edition)**

CREATE CONSTRAINT ON (c:Character) ASSERT exists(c.name);

CREATE CONSTRAINT ON (c:Character) ASSERT c.name IS UNIQUE;

CREATE CONSTRAINT ON (b:Button) ASSERT exists(b.position);

CREATE CONSTRAINT ON (b:Button) ASSERT b.position IS UNIQUE;

CREATE CONSTRAINT ON (a:Action) ASSERT exists(a.name);

CREATE CONSTRAINT ON ()-[rel:MOVE]-() ASSERT exists(rel.direction)

**Nodes**

//Create-Character-Nodes

//Added 8 labels, created 8 nodes, set 8 properties

CREATE

(:Character {name: 'Blanka'}),

(:Character {name: 'Chun-Li'}),

(:Character {name: 'Dhalsim'}),

(:Character {name: 'E. Honda'}),

(:Character {name: 'Guile'}),

(:Character {name: 'Ken'}),

(:Character {name: 'Ryu'}),

(:Character {name: 'Zangief'})

//Create-Control-Nodes

//Added 14 labels, created 7 nodes, set 6 properties

CREATE

(:Control:Button {position:1}),

(:Control:Button {position:2}),

(:Control:Button {position:3}),

(:Control:Button {position:4}),

(:Control:Button {position:5}),

(:Control:Button {position:6}),

(:Control:Joystick)

//Create-Action-Nodes

//Added 14 labels, created 14 nodes, set 14 properties

CREATE

(:Action {name:'jump'}),

(:Action {name:'forward jump'}),

(:Action {name:'forward'}),

(:Action {name:'offensive crouch'}),

(:Action {name:'crouch'}),

(:Action {name:'defensive crouch'}),

(:Action {name:'back defense'}),

(:Action {name:'back flip'}),

(:Action {name:'jab'}),

(:Action {name:'strong punch'}),

(:Action {name:'fierce punch'}),

(:Action {name:'short kick'}),

(:Action {name:'forward kick'}),

(:Action {name:'roundhouse kick'})

//Create-Combo-Nodes

//Added 94 labels, created 47 nodes, set 47 properties

CREATE

(:Action:Combo {name:'wild fang'}),

(:Action:Combo {name:'rock crush'}),

(:Action:Combo {name:'electric thunder'}),

(:Action:Combo {name:'rolling attack'}),

(:Action:Combo {name:'sankaku tobi'}),

(:Action:Combo {name:'koshuu tou'}),

(:Action:Combo {name:'ryuusei raku'}),

(:Action:Combo {name:'yousou kyaku'}),

(:Action:Combo {name:'spinning bird kick'}),

(:Action:Combo {name:'hyakuretsu kyaku'}),

(:Action:Combo {name:'yoga smash'}),

(:Action:Combo {name:'yoga throw'}),

(:Action:Combo {name:'drill zytsuki'}),

(:Action:Combo {name:'drill kick'}),

(:Action:Combo {name:'yoga fire'}),

(:Action:Combo {name:'yoga flame'}),

(:Action:Combo {name:'tawara nage'}),

(:Action:Combo {name:'saba ori'}),

(:Action:Combo {name:'hiza geri'}),

(:Action:Combo {name:'sekkan kyaku'}),

(:Action:Combo {name:'hyakuretsu harite'}),

(:Action:Combo {name:'super zutsuki'}),

(:Action:Combo {name:'judo throw'}),

(:Action:Combo {name:'dragon suplex'}),

(:Action:Combo {name:'flying mare'}),

(:Action:Combo {name:'flying buster drop'}),

(:Action:Combo {name:'knee bazooka'}),

(:Action:Combo {name:'reverse spin kick'}),

(:Action:Combo {name:'sonic boom'}),

(:Action:Combo {name:'somersault kick'}),

(:Action:Combo {name:'seoi nage'}),

(:Action:Combo {name:'tsukami nage'}),

(:Action:Combo {name:'hadouken'}),

(:Action:Combo {name:'shoryuken'}),

(:Action:Combo {name:'tatsumaki senpuukyaku'}),

(:Action:Combo {name:'tomoe nage'}),

(:Action:Combo {name:'piledriver'}),

(:Action:Combo {name:'iron claw'}),

(:Action:Combo {name:'brain buster'}),

(:Action:Combo {name:'kamitsuki'}),

(:Action:Combo {name:'deadly driver'}),

(:Action:Combo {name:'leg throw'}),

(:Action:Combo {name:'stomach claw'}),

(:Action:Combo {name:'kuuchuu headbutt'}),

(:Action:Combo {name:'flying body attack'}),

(:Action:Combo {name:'double lariat'}),

(:Action:Combo {name:'screw piledriver'})

**Relationships**

//Create-Joystick-Action-Relationships

//Each CREATE should return: Set 1 property, created 1 relationship

MATCH (j:Joystick), (a:Action) WHERE a.name="defensive crouch" CREATE (j)-[:MOVE {direction: 'down-left'}]->(a);

MATCH (j:Joystick), (a:Action) WHERE a.name="back defense" CREATE (j)-[:MOVE {direction: 'left'}]->(a);

MATCH (j:Joystick), (a:Action) WHERE a.name="back flip" CREATE (j)-[:MOVE {direction: 'up-left'}]->(a);

MATCH (j:Joystick), (a:Action) WHERE a.name="jump" CREATE (j)-[:MOVE {direction: 'up'}]->(a);

MATCH (j:Joystick), (a:Action) WHERE a.name="forward jump" CREATE (j)-[:MOVE {direction: 'up-right'}]->(a);

MATCH (j:Joystick), (a:Action) WHERE a.name="crouch" CREATE (j)-[:MOVE {direction: 'down'}]->(a);

MATCH (j:Joystick), (a:Action) WHERE a.name="offensive crouch" CREATE (j)-[:MOVE {direction: 'down-right'}]->(a);

MATCH (j:Joystick), (a:Action) WHERE a.name="forward" CREATE (j)-[:MOVE {direction: 'right'}]->(a)

//Create-Button-Action-Relationships

//Each CREATE should return: Created 1 relationship

MATCH (b:Button), (a:Action) WHERE b.position = 6 AND a.name="roundhouse kick" CREATE (b)-[:PRESS]->(a);

MATCH (b:Button), (a:Action) WHERE b.position = 5 AND a.name="forward kick" CREATE (b)-[:PRESS]->(a);

MATCH (b:Button), (a:Action) WHERE b.position = 4 AND a.name="short kick" CREATE (b)-[:PRESS]->(a);

MATCH (b:Button), (a:Action) WHERE b.position = 3 AND a.name="fierce punch" CREATE (b)-[:PRESS]->(a);

MATCH (b:Button), (a:Action) WHERE b.position = 2 AND a.name="strong punch" CREATE (b)-[:PRESS]->(a);

MATCH (b:Button), (a:Action) WHERE b.position = 1 AND a.name="jab" CREATE (b)-[:PRESS]->(a)

//Create-Button-Action-Combo-Relationships

//Each CREATE should return respectively: Created 11 relationships, Created 13 relationships, Created 7 relationships, Created 4 relationships, Created 6 relationships, Created 3 relationships

MATCH (a:Action), (c:Combo) WHERE a.name='jab' AND c.name IN ['electric thunder','rolling attack','yoga fire','yoga flame','hyakuretsu harite','super zutsuki','sonic boom','hadouken','shoryuken','double lariat','screw piledriver'] CREATE (a)-[:EXECUTE]->(c);

MATCH (a:Action), (c:Combo) WHERE a.name='strong punch' AND c.name IN ['rock crush','koshuu tou','ryuusei raku','yoga smash','tawara nage','judo throw','flying mare','seoi nage','piledriver','iron claw','deadly driver','stomach claw','kuuchuu headbutt'] CREATE (a)-[:EXECUTE]->(c);

MATCH (a:Action), (c:Combo) WHERE a.name='fierce punch' AND c.name IN ['wild fang','yoga throw','drill zutsuki','saba ori','dragon suplex','brain buster','kamitsuki','flying body attack'] CREATE (a)-[:EXECUTE]->(c);

MATCH (a:Action), (c:Combo) WHERE a.name='short kick' AND c.name IN ['spinning bird kick','hyakuretsu kyaku','somersault kick','tatsumaki senpuukyaku'] CREATE (a)-[:EXECUTE]->(c);

MATCH (a:Action), (c:Combo) WHERE a.name='forward kick' AND c.name IN ['yousou kyaku','hiza geri','flying buster drop','knee bazooka','tsukami nage','tomoe nage'] CREATE (a)-[:EXECUTE]->(c);

MATCH (a:Action), (c:Combo) WHERE a.name='roundhouse kick' AND c.name IN ['drill kick','sekkan kyaku','reverse spin kick'] CREATE (a)-[:EXECUTE]->(c)

//Create-Joystick-Action-Combo-Relationships

//Each CREATE should return respectively: Created 7 relationships, Created 1 relationship, Created 29 relationships, Created 8 relationships, Created 13 relationships, Created 3 relationships, Created 6 relationships, Created 1 relationship

MATCH (a:Action), (c:Combo) WHERE a.name='jump' AND c.name IN ['spinning bird kick','drill zutsuki','drill kick','flying mare','flying buster drop','somersault kick','kuuchuu headbutt','screw piledriver'] CREATE (a)-[:EXECUTE]->(c);

MATCH (a:Action), (c:Combo) WHERE a.name='forward jump' AND c.name IN ['screw piledriver'] CREATE (a)-[:EXECUTE]->(c);

MATCH (a:Action), (c:Combo) WHERE a.name='forward' AND c.name IN ['wild fang','rock crush','rolling attack','koshuu tou','ryuusei raku','yoga smash','yoga throw','yoga fire','yoga flame','tawara nage','saba ori','hiza geri','sekkan kyaku','super zutsuki','judo throw','dragon suplex','knee bazooka','reverse spin kick','sonic boom','seoi nage','tsukami nage','hadouken','shoryuken','tomoe nage','piledriver','iron claw','brain buster','kamitsuki','screw piledriver'] CREATE (a)-[:EXECUTE]->(c);

MATCH (a:Action), (c:Combo) WHERE a.name='offensive crouch' AND c.name IN ['yoga fire','yoga flame','hadouken','shoryuken','deadly driver','leg throw','stomach claw','screw piledriver'] CREATE (a)-[:EXECUTE]->(c);

MATCH (a:Action), (c:Combo) WHERE a.name='crouch' AND c.name IN ['yousou kyaku','spinning bird kick','drill zutsuki','drill kick','yoga fire','yoga flame','flying mare','flying buster drop','somersault kick','hadouken','shoryuken','tatsumaki senpuukyaku','flying body attack','screw piledriver'] CREATE (a)-[:EXECUTE]->(c);

MATCH (a:Action), (c:Combo) WHERE a.name='defensive crouch' AND c.name IN ['yoga flame','tatsumaki senpuukyaku','screw piledriver'] CREATE (a)-[:EXECUTE]->(c);

MATCH (a:Action), (c:Combo) WHERE a.name='back defense' AND c.name IN ['rolling attack','yoga flame','super zutsuki','sonic boom','tatsumaki senpuukyaku','screw piledriver'] CREATE (a)-[:EXECUTE]->(c);

MATCH (a:Action), (c:Combo) WHERE a.name='back flip' AND c.name IN ['screw piledriver'] CREATE (a)-[:EXECUTE]->(c)

//Create-Character-Joystick-Action-Relationships

//Created 64 relationships

MATCH (a:Action),(c:Character) WHERE a.name IN ["jump", "forward jump", "forward", "offensive crouch", "crouch", "defensive crouch", "back defense", "back flip"] AND c.name IN ["Blanka", "Chun-Li", "Dhalsim", "E. Honda", "Guile", "Ken", "Ryu", "Zangief"] CREATE (c)-[:EXECUTE\_MOVE]->(a)

//Create-Character-Button-Action-Relationships

//Created 48 relationships

MATCH (a:Action),(c:Character) WHERE a.name IN ["roundhouse kick", "forward kick", "short kick", "fierce punch", "strong punch", "jab"] AND c.name IN ["Blanka", "Chun-Li", "Dhalsim", "E. Honda", "Guile", "Ken", "Ryu", "Zangief"] CREATE (c)-[:EXECUTE\_MOVE]->(a)

//Create Character-Combo-Relationships

//Each CREATE should return respectively: Created 11 relationships, Created 4 relationships, Created 5 relationships, Created 8 relationships, Created 6 relationships, Created 6 relationships, Created 6 relationships, Created 4 relationships

MATCH (a:Action),(c:Character) WHERE c.name="Zangief" AND a.name IN ["piledriver", "iron claw", "brain buster", "kamitsuki", "deadly driver", "leg throw", "stomach claw", "kuuchuu headbutt", "flying body attack", "double lariat", "screw piledriver"] CREATE (c)-[:EXECUTE\_MOVE]->(a);

MATCH (a:Action),(c:Character) WHERE c.name="Ryu" AND a.name IN ["seoi nage", "tomoe nage", "hadouken", "shoryuken", "tasumaki senpuukyaku"] CREATE (c)-[:EXECUTE\_MOVE]->(a);

MATCH (a:Action),(c:Character) WHERE c.name="Ken" AND a.name IN ["seoi nage", "tsukami nage", "hadouken", "shoryuken", "tatsumaki senpuukyaku"] CREATE (c)-[:EXECUTE\_MOVE]->(a);

MATCH (a:Action),(c:Character) WHERE c.name="Guile" AND a.name IN ["judo throw", "dragon suplex", "flying mare", "flying buster drop", "knee bazooka", "reverse spin kick", "sonic boom", "somersault kick"] CREATE (c)-[:EXECUTE\_MOVE]->(a);

MATCH (a:Action),(c:Character) WHERE c.name="E. Honda" AND a.name IN ["tawara nage", "saba ori", "hiza geri", "sekkan kyaku", "hyakuretsu harite", "super zutsuki"] CREATE (c)-[:EXECUTE\_MOVE]->(a);

MATCH (a:Action),(c:Character) WHERE c.name="Dhalsim" AND a.name IN ["yoga smash", "yoga throw", "drill zytsuki", "drill kick", "yoga fire", "yoga flame"] CREATE (c)-[:EXECUTE\_MOVE]->(a);

MATCH (a:Action),(c:Character) WHERE c.name="Chun-Li" AND a.name IN ["sankaku tobi", "koshuu tou", "ryuusei raku", "yousou kyaku", "spinning bird kick", "hyakuretsu kyaku"] CREATE (c)-[:EXECUTE\_MOVE]->(a);

MATCH(a:Action),(c:Character) WHERE c.name="Blanka" AND a.name IN ["wild fang", "rock crush", "electric thunder", "rolling attack"] CREATE (c)-[:EXECUTE\_MOVE]->(a)