NAME

PathGraph

SYNOPSIS

use Graph::PathGraph;

use Graph::PathGraph qw(:all);

DESCRIPTION

PathGraph class provides the following methods:

new, CollapseVertexAndCollectCyclicPaths, DeleteVerticesWithDegreeLessThan, GetCyclicPaths, GetPaths, IsPathGraph, StringifyPathGraph

PathGraph class is derived from *Graph* class.

METHODS

new

```
$NewPathGraph = new Graph::PathGraph($Graph);
```

Using specified *Graph*, new method creates a new PathGraph object and returns newly created PathGraph object.

Graph is converted into a PathGraph by copying all its vertices and edges without any associated properties data and associating a *Path* object to each edge containing edge vertex IDs as intial path.

CollapseVertexAndCollectCyclicPaths

```
$PathGraph->CollapseVertexAndCollectCyclicPaths($VertexID);
```

Collapses paths around a *VertexID* by updating paths around the vertex [Ref 31] and associating any resulting cyclic paths to graph as CyclicPaths property name. And returns *PathGraph*.

DeleteVerticesWithDegreeLessThan

```
$Return = $PathGraph->DeleteVerticesWithDegreeLessThan($Degree);
```

Deletes vertices with degree less than *Degree* from *PathGraph* and returns *PathGraph*.

GetCyclicPaths

```
@CyclicPaths = $PathGraph->GetCyclicPaths();
$NumOfPaths = $PathGraph->GetCyclicPaths();
```

Returns an array of cyclic *Paths* associated with edges in *PathGraph*. In scalar context, number of cyclic paths is returned.

GetPaths

```
@Paths = $PathGraph->GetPaths();
$NumOfPaths = $PathGraph->GetPaths();
```

Returns an array of *Paths* associated with edges in *PathGraph*. In scalar context, number of paths is returned.

IsPathGraph

```
$Status = Graph::PathGraph::IsPathGraph($Object);
```

Returns 1 or 0 based on whether *Object* is a PathGraph object.

StringifyPathGraph

```
$String = $PathGraph->StringifyPathGraph();
```

Returns a string containing information about traversed paths in *PathGraph* object.

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SEE ALSO

Graph.pm, Path.pm

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