



1

help

## add vertices to graph

I want to add vertices to a graph object, but it doesn't work.

```
g = graph.ring(5)
subG = induced.subgraph(g, c(1,2,3)) ##extract sub-graph
v = V(g)[4] ##add vertex '4' to the sub-graph.
result = subG + v
```

The result I expected will be a graph with vertices 1,2,3 and 4. With 4 unlinked to 1,2,3. But the output is IGRAPH U--- 7 2 -- Ring graph It seems to have added 4 vertices to subG.

What's the reason for this and how to achieve my goal?

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edited Jul 4 at 8:55

asked Jul 3 at 15:51



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Error in induced.subgraph(g, 1, 2, 3) : unused argument (3) – [Gabor Csardi](#) Jul 3 at 17:29

@GaborCsardi it should be `subG = induced.subgraph(g, c(1,2,3))`, which means to extract the subgraph formed by vertices 1,2,3 – [yliueagle](#) Jul 4 at 8:56

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### 1 Answer

I think you're looking for the `add.vertices` command:

```
g <- graph.ring(5)
subG <- induced.subgraph(g, c(1, 2, 3))
subG <- add.vertices(subG, 1)
```

This gives us

```
> subG
IGRAPH U--- 4 2 -- Ring graph
+ attr: name (g/c), mutual (g/l), circular (g/l)

> get.adjacency(subG)
4 x 4 sparse Matrix of class "dgCMatrix"

[1,] . 1 . .
[2,] 1 . 1 .
[3,] . 1 . .
[4,] . . . .
```

answered Jul 3 at 16:29



482 2 10

Sorry I missed one code line. I do not want to just add a vertex, but to add some specific vertex, for example to add some nodes from the big graph to a subgraph, while keep all the attributes of the nodes. – [yliueagle](#)

Jul 3 at 16:36

Your code evaluates to `subG + 4`, which adds four vertices to `subG`; instead you want `subG + 1`. – [tkmckenzie](#) Jul 3 at 16:45

But `v=V(g)[4]`, which is a vertex object, instead of an integer – [yliueagle](#) Jul 4 at 8:58

You cannot add vertex objects from one graph into another (because there is no such thing as a "vertex object" in igraph -- you only have a sequence of vertex IDs). You have to add a vertex manually to your new graph and then copy its attributes over. – [Tamás](#) Jul 4 at 14:06

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