

Example 1

From the Test case 1.

```
java PA5 PA5-exampleData.txt printNewsFeed epyle 0 20
```

```
2502 4 epyle Message_for_Object2502 411 234
4681 4 willr Message_for_Objec4681 98 175
2890 4 willr Message_for_Object2890 356 140
1874 4 theodore789 Message_for_Object1874 501 90
1872 4 theodore789 Message_for_Object1872 509 90
...
```

Viewer: epyle
epyle's information

member epyle Ernie Pyle friend willr 7 friend theodore789 6 friend theodore1 8

Default Tables (from PA2)

Table A. Members' Activities and Weight score

Activity	Weight
Visit (just browsing) (type: 6)	1
Click like (type: 5)	2
Add a Comment (type: 2)	3
Posting on the wall (type: 1)	4
Status Change(type: 4)	5
There will be no type 3 in the activity	0

Table B. Time Decay

Age of the NewsFeed Object in minutes	Time Decay value
$0 < \text{age} \leq 60$ minutes old	6
$60 < \text{age} \leq 180$ minutes old	5
$180 < \text{age} \leq 360$ minutes old	4
$360 < \text{age} \leq 720$ minutes old	3
$720 < \text{age} \leq 1440$ minutes old	2
$1440 < \text{age} \leq 2880$ minutes old	1
$2880 < \text{age}$ minutes old (older than 2 days)	0

```
2890 4 willr Message_for_Object2890 356 140
```

Step 1) get all the related items -- this is the only item

Step 2) calculate the edgerank scores and sum up the scores.

EdgeRank = Weight x Affinity x TimeDecay = 5(type 4 from table A) x 7(affinity score for willr that epyle has) x 5 (second case in Table B) = 175

Example 2

From the Test case 3.

```
java PA5 PA5-exampleData.txt printNewsFeed sinclair 0 20
```

```
4681 4 willr Message_for_Object4681 98 175
```

```
2502 4 epyle Message_for_Object2502 411 141
```

```
2890 4 willr Message_for_Object2890 356 140
```

```
1874 4 theodore789 Message_for_Object1874 501 90
```

```
1872 4 theodore789 Message_for_Object1872 509 90
```

```
...
```

```
Viewer: sinclair
```

```
sinclair's information
```

```
member sinclair Upton Sinclair
```

```
friend theodore789 6
```

```
friend willr 7
```

1. Start from the sinclair and his friends' activities.
Sinclair does not have any edges now.

His friend theodore789's edges

edge

```
item 1671 4 theodore789 Message_for_Object1671 776
```

```
reference 13 3 theodore789 http://www.cs200classmatebook.org/~theodore789 91211
```

edge

```
item 1675 4 theodore789 Message_for_Object1675 773
```

```
reference 13 3 theodore789 http://www.cs200classmatebook.org/~theodore789 91211
```

edge

```
item 1872 4 theodore789 Message_for_Object1872 509
```

```
reference 13 3 theodore789 http://www.cs200classmatebook.org/~theodore789 91211
```

edge

```
item 1874 4 theodore789 Message_for_Object1874 501
```

```
reference 13 3 theodore789 http://www.cs200classmatebook.org/~theodore789 91211
```

edge

```
item 2631 2 theodore789 Comment_for_Object2631 398
```

```
reference 2502 4 epyle Message_for_Object2502 411
```

His friend willr's edges

edge

```
item 2600 2 willr Comment_for_Object2600 400
```

```
reference 2502 4 epyle Message_for_Object2502 411
```

edge

```
item 2890 4 willr Message_for_Object2890 356
```

```
reference 760 3 willr http://www.cs200classmatebook.org/~willr 12999
```

edge

```
item 4681 4 willr Message_for_Object4681 98
```

```
reference 760 3 willr http://www.cs200classmatebook.org/~willr 12999
```

2. for the items with type 4 or 1

Step 1) get all the related items (e.g. item 1872): this is the only item.

Step 2) calculate the edgerank scores for all of the related items and sum up the scores.
Do not forget including itself!

For item 1872 created by theodore789,
 $\text{Weight} \times \text{Affinity} \times \text{TimeDecay} = 5 \times 6 \times 3 = 90$

3. for the items with type 2,5, or 6

Step 1) find the original posting (it is specified in the "reference")

Example) theodore789's edge,

item 2631 2 theodore789 Comment_for_Object2631 398

reference 2502 4 epyle Message_for_Object2502 411

item 2631 is a "comment" and the original posting theodore789 commented on was item 2502 created by epyle. Please note that epyle is not the viewer's friend.

Step 2) find the related items of the original posting

Example continued)

Item 2502 has related items,

item 2502 4 epyle Message_for_Object2502 411

reference 98 3 epyle <http://www.cs200classmatebook.org/~epyle> 88790

item 2631 2 theodore789 Comment_for_Object2631 398

reference 2502 4 epyle Message_for_Object2502 411

item 2630 2 theodore1 Comment_for_Object2630 399

reference 2502 4 epyle Message_for_Object2502 411

item 2600 2 willr Comment_for_Object2600 400

reference 2502 4 epyle Message_for_Object2502 411

You can find this with checking the reference items in the list of,
`LinkedList<Edge> getFriendsEdges(epyle)`

Step 3) calculate the edgerank scores

$\text{EdgeRank}(\text{Item } 2502) = \text{Weight} \times \text{Affinity} \times \text{TimeDecay} = 5 \times 1$ (epyle is not viewer's friend!) $\times 3 = 15$

$\text{EdgeRank}(\text{Item } 2631) = 3 \times 6 \times 3 = 54$

$\text{EdgeRank}(\text{Item } 2630) = 3 \times 1$ (theodore1 is not viewer's friend) $\times 3 = 9$

$\text{EdgeRank}(\text{Item } 2600) = 3 \times 7 \times 3 = 63$

Step 4) Add all the edgerank scores

$15+54+9+63 = 141$