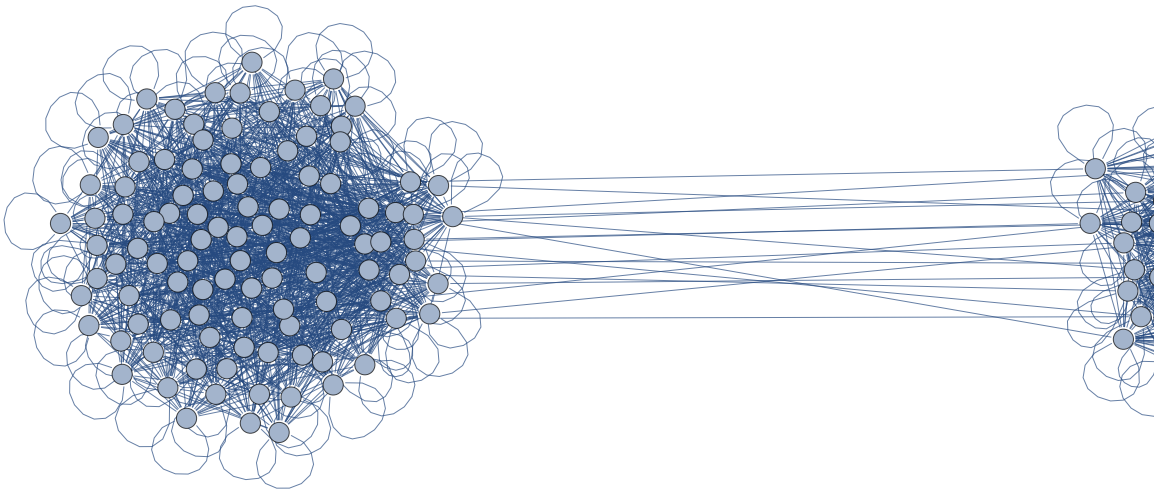
**g =**



```
Needs["GraphUtilities`"]
FindMinimumCut[g]
```

```
{17,
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   80, 81, 84, 85, 86, 87, 89, 91, 93, 96, 97, 98, 99, 100, 102, 107, 108, 112, 113,
   115, 118, 119, 120, 121, 122, 124, 125, 126, 127, 131, 132, 133, 135,
   137, 139, 140, 144, 145, 146, 149, 150, 151, 155, 156, 158, 160, 164,
   166, 171, 172, 174, 175, 178, 185, 191, 193, 195, 196, 198, 200},
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   51, 54, 59, 61, 63, 65, 66, 70, 72, 74, 77, 82, 83, 88, 90, 92, 94, 95, 101, 103, 104,
   105, 106, 109, 110, 111, 114, 116, 117, 123, 128, 129, 130, 134, 136, 138, 141, 142,
   143, 147, 148, 152, 153, 154, 157, 159, 161, 162, 163, 165, 167, 168, 169, 170, 173,
   176, 177, 179, 180, 181, 182, 183, 184, 186, 187, 188, 189, 190, 192, 194, 197, 199}}}
```
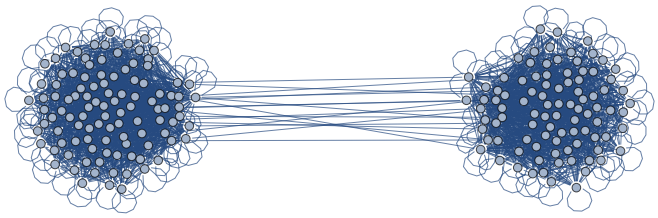

```
ClearAll["Global`*"]
Needs["Combinatorica`"]
data = Import[
    "C:\\Users\\tshao\\Dropbox\\data and algorithm\\kargerMinCut.dat", "Table"];
g = FromAdjacencyLists[data];

gg = ToAdjacencyMatrix[g];
AdjacencyGraph[gg]
```



```
ClearAll["Global`*"]
Needs["Combinatorica`"]
data = Import[
    "C:\\Users\\tshao\\Dropbox\\data and algorithm\\kargerMinCut.dat", "Table"];
g = FromAdjacencyLists[data];
Agg = ToAdjacencyMatrix[g];
gg = Agg;
```

```
e1 = 10 000;
e = 10 000;
p = 200;
S[n_] := Module[{i, j, d, r, f, u, v}, r = 0; f = 0;
  For[i = 1, i < p + 1, i++, For[j = 1, j < p + 1, j++,
    If[gg[[i, j]] > 0, r = r + gg[[i, j]]]]]; d = RandomInteger[{1, r}];
  For[i = 1, i < p + 1, i++, For[j = 1, j < p + 1, j++, If[gg[[i, j]] > 0, f = f + gg[[i, j]]];
    If[f > d || f == d, Break[]]]; If[f > d || f == d, l = i; m = j; Break[]]]];
DSL = Module[{i}, For[i = 1, i < p + 1, i++, gg[[i, i]] = 0]];
Timing[For[k = 1, k < 100, k++, e1 = e; gg = Agg;
  DSL = Module[{i}, For[i = 1, i < p + 1, i++, gg[[i, i]] = 0]];
  For[n = 0, n < p - 2, n++,
   S[n];
   a = Min[l, m];
   b = Max[l, m];
   gg[[a]] = gg[[b]] + gg[[a]];
   gg[[All, a]] = gg[[a, All]];
   gg[[b]] = gg[[1]] - gg[[1]];
   gg[[All, b]] = gg[[b, All]];
   DSL = Module[{i}, For[i = 1, i < p + 1, i++, gg[[i, i]] = 0]];
   e = Total[gg, 2]];
  Print[{e1, e, k}]; e = Min[e1, e]]]
```

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{34, 44, 17}
{34, 40, 18}
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```

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```