

MapReduce

Classroom example

This is the file to create a map reduce classroom example. The setup is as follows

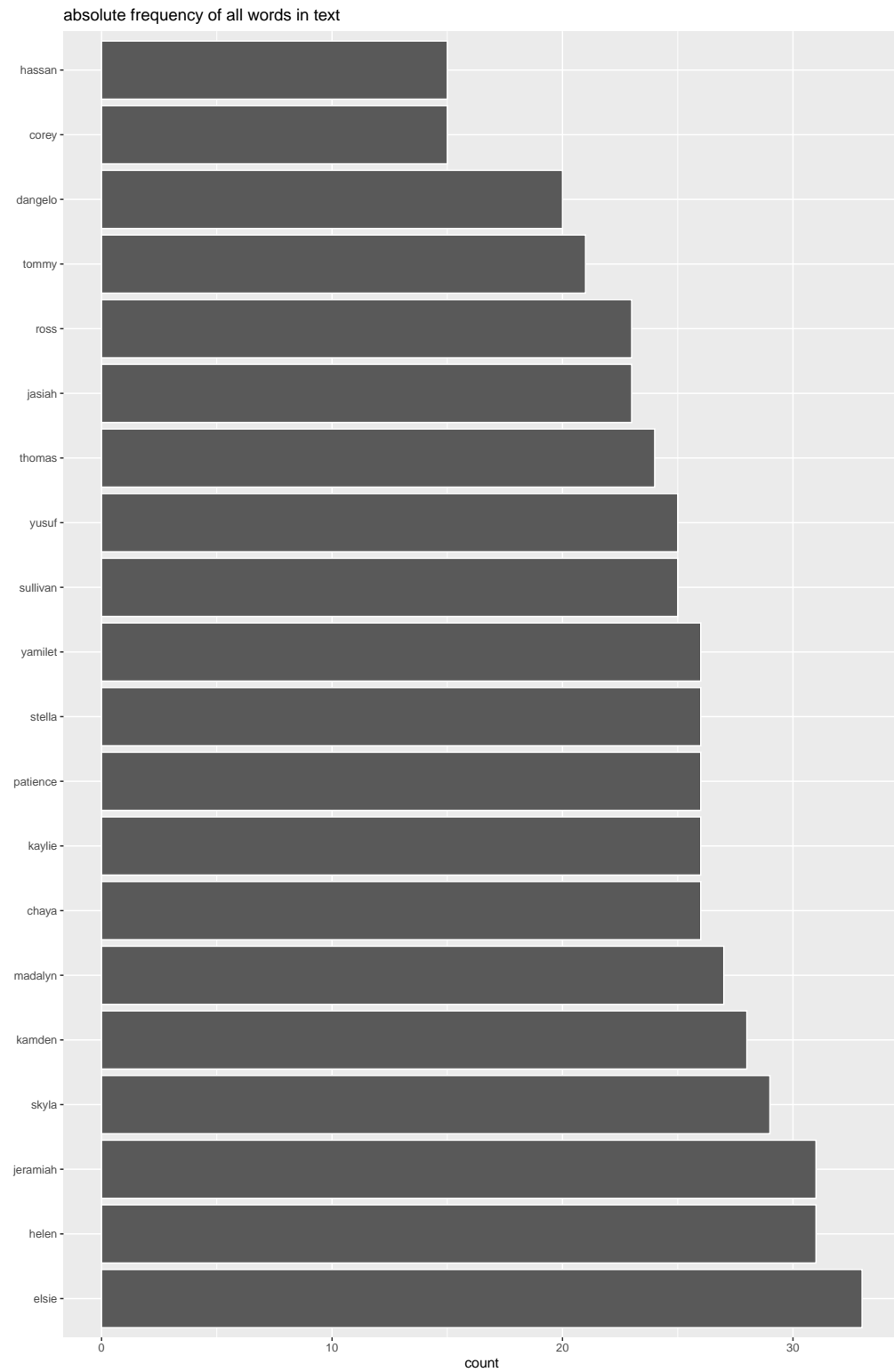
1. print this file
2. give the raw file to 1-4 students, they shall count the words. Measure the time. This is sequential processing.
3. give the chunked file to the respective number of students. There are $n = 2, 4, 5, 10$ groups available. The number of students is the chunk server.
4. one student acts as the “reduce” server, collecting all the counts.
5. write the counts on the whiteboard including the times
6. which number of groups is the most efficient and which produces considerable overhead?

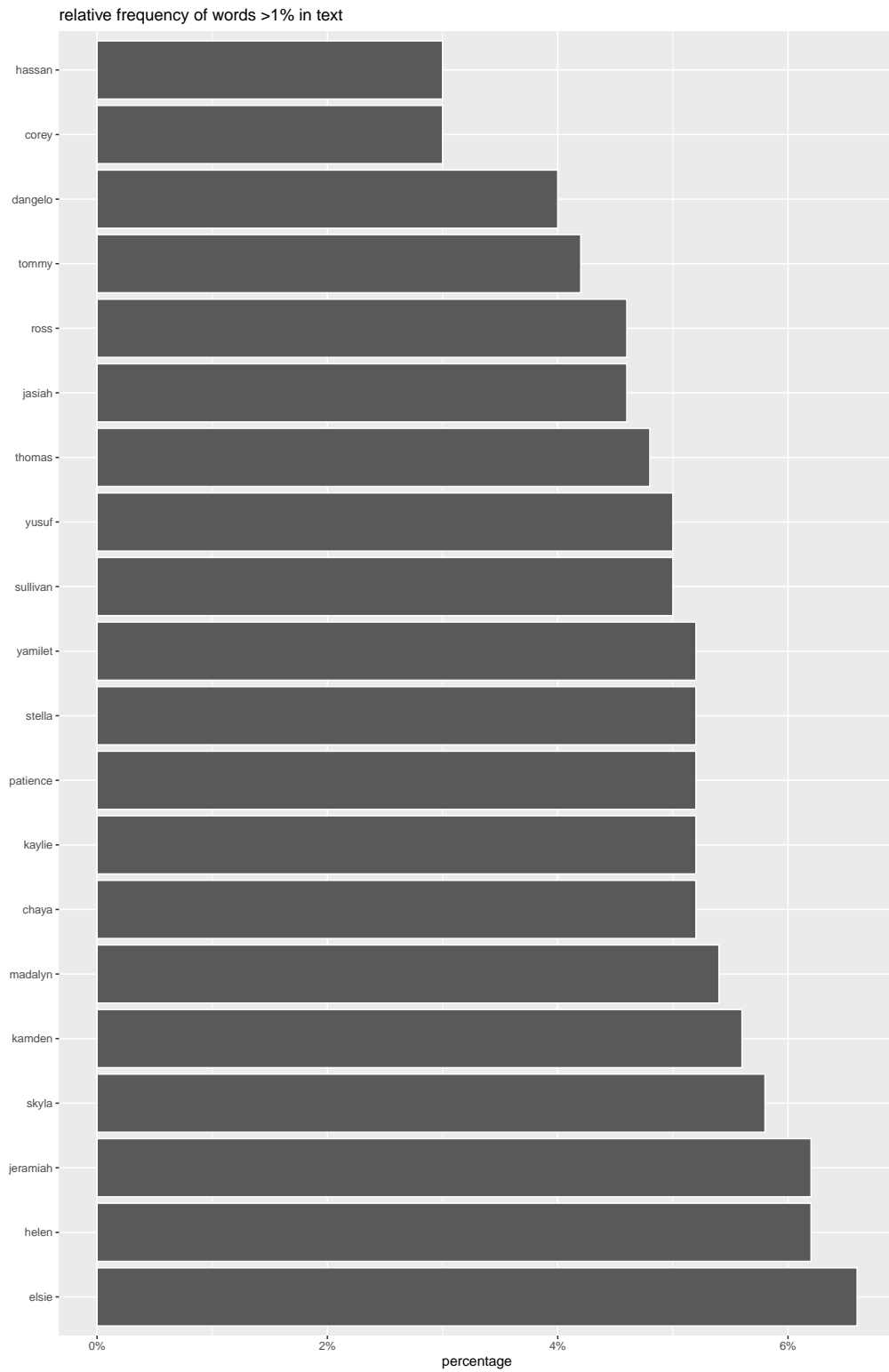
some summary statistics on the raw data

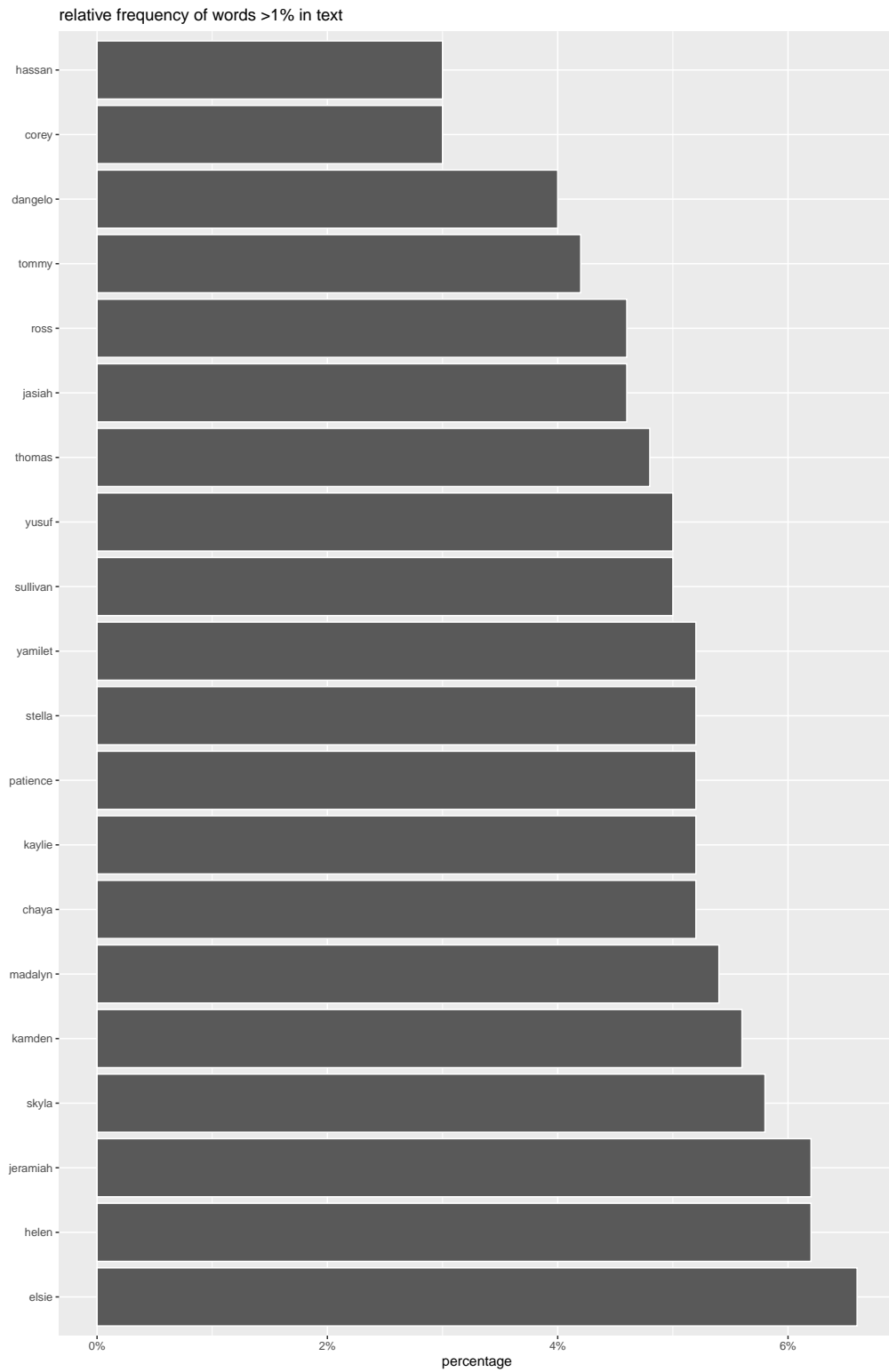
In total there are 500 words available.

words	Freq	percentage	percentage_round
elsie	33	6.60%	6.60%
helen	31	6.20%	6.20%
jeramiah	31	6.20%	6.20%
skyla	29	5.80%	5.80%
kamden	28	5.60%	5.60%
madalyn	27	5.40%	5.40%
chaya	26	5.20%	5.20%
kaylie	26	5.20%	5.20%
patience	26	5.20%	5.20%
stella	26	5.20%	5.20%
yamilet	26	5.20%	5.20%
sullivan	25	5.00%	5.00%

yusuf	25	5.00%	5.00%
thomas	24	4.80%	4.80%
jasiah	23	4.60%	4.60%
ross	23	4.60%	4.60%
tommy	21	4.20%	4.20%
dangelo	20	4.00%	4.00%
corey	15	3.00%	3.00%
hassan	15	3.00%	3.00%







The Raw data 01

Elsie, Jeramiah, Yusuf, Chaya, Skyla, Thomas, Skyla, Jasiah, Ross , Yamilet, Kamden, Patience, Ross , Helen, Madalyn, Hassan, Corey, Sullivan, Kamden, Elsie, Chaya, Yusuf, Chaya, Chaya, Kaylie, Jeramiah, Thomas, Dangelo, Ross , Patience, Elsie, Helen, Stella, Skyla, Thomas, Hassan, Kamden, Kaylie, Elsie, Dangelo, Corey, Elsie, Elsie, Skyla, Yamilet, Madalyn, Helen, Sullivan, Helen, Sullivan, Corey, Jasiah, Dangelo, Dangelo, Sullivan, Tommy, Ross , Jeramiah, Patience, Jeramiah, Jasiah, Jeramiah, Kamden, Stella, Helen, Patience, Kamden, Chaya, Stella, Yusuf, Patience, Kamden, Kamden, Jasiah, Ross , Skyla, Yamilet, Elsie, Dangelo, Thomas, Skyla, Helen, Stella, Kamden, Jasiah, Jasiah, Yamilet, Patience, Ross , Chaya, Tommy, Thomas, Ross , Madalyn, Helen, Jeramiah, Elsie, Sullivan, Patience, Thomas, Hassan, Sullivan, Yusuf, Tommy, Madalyn, Corey, Chaya, Thomas, Stella, Tommy, Stella, Patience, Helen, Patience, Patience, Hassan, Chaya, Yusuf, Stella, Patience, Kaylie, Madalyn, Kamden, Yusuf, Elsie, Helen, Kamden, Elsie, Hassan, Dangelo, Kamden, Dangelo, Dangelo, Sullivan, Helen, Madalyn, Chaya, Sullivan, Jasiah, Ross , Jeramiah, Jasiah, Helen, Dangelo, Jasiah, Dangelo, Skyla, Helen, Elsie, Ross , Madalyn, Kamden, Chaya, Sullivan, Ross , Kaylie, Sullivan, Helen, Ross , Patience, Kaylie, Corey, Kamden, Yusuf, Helen, Hassan, Sullivan, Stella, Chaya, Elsie, Dangelo, Kaylie, Dangelo, Stella, Skyla, Chaya, Helen, Hassan, Yusuf, Corey, Madalyn, Kaylie, Corey, Jasiah, Hassan, Thomas, Corey, Jeramiah, Yamilet, Kamden, Yamilet, Skyla, Madalyn, Yusuf, Yamilet, Jeramiah, Jeramiah, Elsie, Elsie, Skyla, Ross , Sullivan, Yusuf, Helen, Kaylie, Patience, Thomas, Madalyn, Stella, Madalyn, Kaylie, Helen, Jeramiah, Madalyn, Skyla, Tommy, Skyla, Yamilet, Kaylie, Stella, Yusuf, Stella, Chaya, Kamden, Helen, Tommy, Tommy, Jasiah, Skyla, Tommy, Kamden, Chaya, Elsie, Madalyn, Sullivan, Elsie, Stella, Stella, Kaylie, Jeramiah, Ross , Ross , Jeramiah, Elsie, Kaylie, Elsie, Thomas, Yamilet, Sullivan, Hassan, Patience, Skyla, Jeramiah, Kamden, Tommy, Madalyn, Helen, Tommy, Elsie, Kamden, Chaya, Corey, Thomas, Skyla, Dangelo, Kamden, Tommy, Yamilet, Jeramiah, Yusuf, Corey, Patience, Tommy, Skyla, Yusuf, Tommy, Sullivan, Thomas, Madalyn, Tommy, Madalyn, Kaylie, Corey, Madalyn, Jasiah, Elsie, Kaylie, Jeramiah, Skyla, Jeramiah, Jeramiah, Stella, Sullivan, Kamden, Yamilet, Yusuf, Skyla, Madalyn, Dangelo, Jasiah, Sullivan, Jasiah, Elsie, Skyla, Yusuf, Chaya, Skyla, Yamilet, Stella, Yamilet, Elsie, Tommy, Hassan, Kamden, Helen, Sullivan, Kaylie, Ross , Jasiah, Madalyn, Patience, Skyla, Helen, Thomas, Patience, Stella, Jasiah, Hassan, Jeramiah, Dangelo, Yusuf, Yamilet, Stella, Kaylie, Tommy, Yamilet, Kamden, Jeramiah, Thomas, Elsie, Jasiah, Stella, Stella, Skyla, Skyla, Madalyn, Stella, Kamden, Madalyn, Helen, Chaya, Elsie, Elsie, Jeramiah, Sullivan, Tommy, Helen, Chaya, Patience, Dangelo, Thomas, Chaya, Stella, Helen, Patience, Madalyn, Chaya, Thomas, Yamilet, Skyla, Corey, Kaylie, Kamden, Patience, Yamilet, Yamilet, Yamilet, Yusuf, Yamilet, Yamilet, Madalyn, Patience, Skyla, Yusuf, Kaylie, Helen, Yusuf, Patience, Chaya, Jasiah, Hassan, Kaylie, Chaya, Yusuf, Sullivan, Kaylie, Dangelo, Ross , Hassan, Stella, Patience, Elsie, Sullivan, Dangelo, Yamilet, Dangelo, Kaylie, Kaylie, Kamden, Thomas, Ross , Ross , Stella, Kaylie, Thomas, Elsie, Jeramiah, Skyla, Sullivan, Thomas, Kaylie, Yamilet, Jeramiah, Tommy, Hassan, Skyla, Skyla, Kaylie, Ross , Madalyn, Kamden, Madalyn, Jeramiah, Helen, Corey, Yamilet, Ross , Jeramiah, Madalyn, Chaya, Helen,

Ross , Elsie, Helen, Yusuf, Ross , Tommy, Elsie, Jasiah, Thomas, Elsie, Elsie, Chaya, Patience, Jeramiah, Patience, Jeramiah, Ross , Madalyn, Jeramiah, Thomas, Jasiah, Sullivan, Jeramiah, Corey, Yusuf, Helen, Elsie, Helen, Thomas, Thomas, Thomas, Yusuf, Sullivan, Yusuf, Yusuf, Chaya, Kaylie, Tommy, Hassan, Jeramiah, Stella, Jasiah, Patience, Jeramiah, Sullivan, Stella, Skyla, Corey, Dangelo, Helen, Tommy, Elsie, Kamden, Yamilet, Yamilet, Chaya, Jasiah, Kamden, Jasiah

The Raw data 02

Elsie, Jeramiah, Yusuf, Chaya, Skyla, Thomas, Skyla, Jasiah, Ross , Yamilet, Kamden, Patience, Ross , Helen, Madalyn, Hassan, Corey, Sullivan, Kamden, Elsie, Chaya, Yusuf, Chaya, Chaya, Kaylie, Jeramiah, Thomas, Dangelo, Ross , Patience, Elsie, Helen, Stella, Skyla, Thomas, Hassan, Kamden, Kaylie, Elsie, Dangelo, Corey, Elsie, Elsie, Skyla, Yamilet, Madalyn, Helen, Sullivan, Helen, Sullivan, Corey, Jasiah, Dangelo, Dangelo, Sullivan, Tommy, Ross , Jeramiah, Patience, Jeramiah, Jasiah, Jeramiah, Kamden, Stella, Helen, Patience, Kamden, Chaya, Stella, Yusuf, Patience, Kamden, Kamden, Jasiah, Ross , Skyla, Yamilet, Elsie, Dangelo, Thomas, Skyla, Helen, Stella, Kamden, Jasiah, Jasiah, Yamilet, Patience, Ross , Chaya, Tommy, Thomas, Ross , Madalyn, Helen, Jeramiah, Elsie, Sullivan, Patience, Thomas, Hassan, Sullivan, Yusuf, Tommy, Madalyn, Corey, Chaya, Thomas, Stella, Tommy, Stella, Patience, Helen, Patience, Patience, Hassan, Chaya, Yusuf, Stella, Patience, Kaylie, Madalyn, Kamden, Yusuf, Elsie, Helen, Kamden, Elsie, Hassan, Dangelo, Kamden, Dangelo, Dangelo, Sullivan, Helen, Madalyn, Chaya, Sullivan, Jasiah, Ross , Jeramiah, Jasiah, Helen, Dangelo, Jasiah, Dangelo, Skyla, Helen, Elsie, Ross , Madalyn, Kamden, Chaya, Sullivan, Ross , Kaylie, Sullivan, Helen, Ross , Patience, Kaylie, Corey, Kamden, Yusuf, Helen, Hassan, Sullivan, Stella, Chaya, Elsie, Dangelo, Kaylie, Dangelo, Stella, Skyla, Chaya, Helen, Hassan, Yusuf, Corey, Madalyn, Kaylie, Corey, Jasiah, Hassan, Thomas, Corey, Jeramiah, Yamilet, Kamden, Yamilet, Skyla, Madalyn, Yusuf, Yamilet, Jeramiah, Jeramiah, Elsie, Elsie, Skyla, Ross , Sullivan, Yusuf, Helen, Kaylie, Patience, Thomas, Madalyn, Stella, Madalyn, Kaylie, Helen, Jeramiah, Madalyn, Skyla, Tommy, Skyla, Yamilet, Kaylie, Stella, Yusuf, Stella, Chaya, Kamden, Helen, Tommy, Tommy, Jasiah, Skyla, Tommy, Kamden, Chaya, Elsie, Madalyn, Sullivan, Elsie, Stella, Stella, Kaylie, Jeramiah, Ross , Ross , Jeramiah, Elsie, Kaylie, Elsie, Thomas, Yamilet, Sullivan, Hassan, Patience, Skyla, Jeramiah, Kamden, Tommy, Madalyn, Helen, Tommy, Elsie, Kamden, Chaya, Corey, Thomas, Skyla, Dangelo, Kamden, Tommy, Yamilet, Jeramiah, Yusuf, Corey, Patience, Tommy, Skyla, Yusuf, Tommy, Sullivan, Thomas, Madalyn, Tommy, Madalyn, Kaylie, Corey, Madalyn, Jasiah, Elsie, Kaylie, Jeramiah, Skyla, Jeramiah, Jeramiah, Stella, Sullivan, Kamden, Yamilet, Yusuf, Skyla, Madalyn, Dangelo, Jasiah, Sullivan, Jasiah, Elsie, Skyla, Yusuf, Chaya, Skyla, Yamilet, Stella, Yamilet, Elsie, Tommy, Hassan, Kamden, Helen, Sullivan, Kaylie, Ross , Jasiah, Madalyn, Patience, Skyla, Helen, Thomas, Patience, Stella, Jasiah, Hassan, Jeramiah, Dangelo, Yusuf, Yamilet, Stella, Kaylie, Tommy, Yamilet, Kamden, Jeramiah, Thomas, Elsie, Jasiah, Stella, Stella, Skyla, Skyla, Madalyn, Stella, Kamden, Madalyn, Helen, Chaya, Elsie, Elsie, Jeramiah, Sullivan, Tommy, Helen, Chaya, Patience, Dangelo, Thomas, Chaya, Stella, Helen, Patience, Madalyn, Chaya, Thomas, Yamilet, Skyla, Corey, Kaylie, Kamden, Patience, Yamilet, Yamilet, Yamilet, Yusuf, Yamilet, Yamilet, Madalyn, Patience, Skyla, Yusuf, Kaylie, Helen, Yusuf, Patience, Chaya, Jasiah, Hassan, Kaylie, Chaya, Yusuf, Sullivan, Kaylie, Dangelo, Ross , Hassan, Stella, Patience, Elsie, Sullivan, Dangelo, Yamilet, Dangelo, Kaylie, Kaylie, Kamden, Thomas, Ross , Ross , Stella, Kaylie, Thomas, Elsie, Jeramiah, Skyla, Sullivan, Thomas, Kaylie, Yamilet, Jeramiah, Tommy, Hassan, Skyla, Skyla, Kaylie, Ross , Madalyn, Kamden, Madalyn, Jeramiah, Helen, Corey, Yamilet, Ross , Jeramiah, Madalyn, Chaya, Helen,

Ross , Elsie, Helen, Yusuf, Ross , Tommy, Elsie, Jasiah, Thomas, Elsie, Elsie, Chaya, Patience, Jeramiah, Patience, Jeramiah, Ross , Madalyn, Jeramiah, Thomas, Jasiah, Sullivan, Jeramiah, Corey, Yusuf, Helen, Elsie, Helen, Thomas, Thomas, Thomas, Yusuf, Sullivan, Yusuf, Yusuf, Chaya, Kaylie, Tommy, Hassan, Jeramiah, Stella, Jasiah, Patience, Jeramiah, Sullivan, Stella, Skyla, Corey, Dangelo, Helen, Tommy, Elsie, Kamden, Yamilet, Yamilet, Chaya, Jasiah, Kamden, Jasiah

The Raw data 03

Elsie, Jeramiah, Yusuf, Chaya, Skyla, Thomas, Skyla, Jasiah, Ross , Yamilet, Kamden, Patience, Ross , Helen, Madalyn, Hassan, Corey, Sullivan, Kamden, Elsie, Chaya, Yusuf, Chaya, Chaya, Kaylie, Jeramiah, Thomas, Dangelo, Ross , Patience, Elsie, Helen, Stella, Skyla, Thomas, Hassan, Kamden, Kaylie, Elsie, Dangelo, Corey, Elsie, Elsie, Skyla, Yamilet, Madalyn, Helen, Sullivan, Helen, Sullivan, Corey, Jasiah, Dangelo, Dangelo, Sullivan, Tommy, Ross , Jeramiah, Patience, Jeramiah, Jasiah, Jeramiah, Kamden, Stella, Helen, Patience, Kamden, Chaya, Stella, Yusuf, Patience, Kamden, Kamden, Jasiah, Ross , Skyla, Yamilet, Elsie, Dangelo, Thomas, Skyla, Helen, Stella, Kamden, Jasiah, Jasiah, Yamilet, Patience, Ross , Chaya, Tommy, Thomas, Ross , Madalyn, Helen, Jeramiah, Elsie, Sullivan, Patience, Thomas, Hassan, Sullivan, Yusuf, Tommy, Madalyn, Corey, Chaya, Thomas, Stella, Tommy, Stella, Patience, Helen, Patience, Patience, Hassan, Chaya, Yusuf, Stella, Patience, Kaylie, Madalyn, Kamden, Yusuf, Elsie, Helen, Kamden, Elsie, Hassan, Dangelo, Kamden, Dangelo, Dangelo, Sullivan, Helen, Madalyn, Chaya, Sullivan, Jasiah, Ross , Jeramiah, Jasiah, Helen, Dangelo, Jasiah, Dangelo, Skyla, Helen, Elsie, Ross , Madalyn, Kamden, Chaya, Sullivan, Ross , Kaylie, Sullivan, Helen, Ross , Patience, Kaylie, Corey, Kamden, Yusuf, Helen, Hassan, Sullivan, Stella, Chaya, Elsie, Dangelo, Kaylie, Dangelo, Stella, Skyla, Chaya, Helen, Hassan, Yusuf, Corey, Madalyn, Kaylie, Corey, Jasiah, Hassan, Thomas, Corey, Jeramiah, Yamilet, Kamden, Yamilet, Skyla, Madalyn, Yusuf, Yamilet, Jeramiah, Jeramiah, Elsie, Elsie, Skyla, Ross , Sullivan, Yusuf, Helen, Kaylie, Patience, Thomas, Madalyn, Stella, Madalyn, Kaylie, Helen, Jeramiah, Madalyn, Skyla, Tommy, Skyla, Yamilet, Kaylie, Stella, Yusuf, Stella, Chaya, Kamden, Helen, Tommy, Tommy, Jasiah, Skyla, Tommy, Kamden, Chaya, Elsie, Madalyn, Sullivan, Elsie, Stella, Stella, Kaylie, Jeramiah, Ross , Ross , Jeramiah, Elsie, Kaylie, Elsie, Thomas, Yamilet, Sullivan, Hassan, Patience, Skyla, Jeramiah, Kamden, Tommy, Madalyn, Helen, Tommy, Elsie, Kamden, Chaya, Corey, Thomas, Skyla, Dangelo, Kamden, Tommy, Yamilet, Jeramiah, Yusuf, Corey, Patience, Tommy, Skyla, Yusuf, Tommy, Sullivan, Thomas, Madalyn, Tommy, Madalyn, Kaylie, Corey, Madalyn, Jasiah, Elsie, Kaylie, Jeramiah, Skyla, Jeramiah, Jeramiah, Stella, Sullivan, Kamden, Yamilet, Yusuf, Skyla, Madalyn, Dangelo, Jasiah, Sullivan, Jasiah, Elsie, Skyla, Yusuf, Chaya, Skyla, Yamilet, Stella, Yamilet, Elsie, Tommy, Hassan, Kamden, Helen, Sullivan, Kaylie, Ross , Jasiah, Madalyn, Patience, Skyla, Helen, Thomas, Patience, Stella, Jasiah, Hassan, Jeramiah, Dangelo, Yusuf, Yamilet, Stella, Kaylie, Tommy, Yamilet, Kamden, Jeramiah, Thomas, Elsie, Jasiah, Stella, Stella, Skyla, Skyla, Madalyn, Stella, Kamden, Madalyn, Helen, Chaya, Elsie, Elsie, Jeramiah, Sullivan, Tommy, Helen, Chaya, Patience, Dangelo, Thomas, Chaya, Stella, Helen, Patience, Madalyn, Chaya, Thomas, Yamilet, Skyla, Corey, Kaylie, Kamden, Patience, Yamilet, Yamilet, Yamilet, Yusuf, Yamilet, Yamilet, Madalyn, Patience, Skyla, Yusuf, Kaylie, Helen, Yusuf, Patience, Chaya, Jasiah, Hassan, Kaylie, Chaya, Yusuf, Sullivan, Kaylie, Dangelo, Ross , Hassan, Stella, Patience, Elsie, Sullivan, Dangelo, Yamilet, Dangelo, Kaylie, Kaylie, Kamden, Thomas, Ross , Ross , Stella, Kaylie, Thomas, Elsie, Jeramiah, Skyla, Sullivan, Thomas, Kaylie, Yamilet, Jeramiah, Tommy, Hassan, Skyla, Skyla, Kaylie, Ross , Madalyn, Kamden, Madalyn, Jeramiah, Helen, Corey, Yamilet, Ross , Jeramiah, Madalyn, Chaya, Helen,

Ross , Elsie, Helen, Yusuf, Ross , Tommy, Elsie, Jasiah, Thomas, Elsie, Elsie, Chaya, Patience, Jeramiah, Patience, Jeramiah, Ross , Madalyn, Jeramiah, Thomas, Jasiah, Sullivan, Jeramiah, Corey, Yusuf, Helen, Elsie, Helen, Thomas, Thomas, Thomas, Yusuf, Sullivan, Yusuf, Yusuf, Chaya, Kaylie, Tommy, Hassan, Jeramiah, Stella, Jasiah, Patience, Jeramiah, Sullivan, Stella, Skyla, Corey, Dangelo, Helen, Tommy, Elsie, Kamden, Yamilet, Yamilet, Chaya, Jasiah, Kamden, Jasiah

The Raw data 04

Elsie, Jeramiah, Yusuf, Chaya, Skyla, Thomas, Skyla, Jasiah, Ross , Yamilet, Kamden, Patience, Ross , Helen, Madalyn, Hassan, Corey, Sullivan, Kamden, Elsie, Chaya, Yusuf, Chaya, Chaya, Kaylie, Jeramiah, Thomas, Dangelo, Ross , Patience, Elsie, Helen, Stella, Skyla, Thomas, Hassan, Kamden, Kaylie, Elsie, Dangelo, Corey, Elsie, Elsie, Skyla, Yamilet, Madalyn, Helen, Sullivan, Helen, Sullivan, Corey, Jasiah, Dangelo, Dangelo, Sullivan, Tommy, Ross , Jeramiah, Patience, Jeramiah, Jasiah, Jeramiah, Kamden, Stella, Helen, Patience, Kamden, Chaya, Stella, Yusuf, Patience, Kamden, Kamden, Jasiah, Ross , Skyla, Yamilet, Elsie, Dangelo, Thomas, Skyla, Helen, Stella, Kamden, Jasiah, Jasiah, Yamilet, Patience, Ross , Chaya, Tommy, Thomas, Ross , Madalyn, Helen, Jeramiah, Elsie, Sullivan, Patience, Thomas, Hassan, Sullivan, Yusuf, Tommy, Madalyn, Corey, Chaya, Thomas, Stella, Tommy, Stella, Patience, Helen, Patience, Patience, Hassan, Chaya, Yusuf, Stella, Patience, Kaylie, Madalyn, Kamden, Yusuf, Elsie, Helen, Kamden, Elsie, Hassan, Dangelo, Kamden, Dangelo, Dangelo, Sullivan, Helen, Madalyn, Chaya, Sullivan, Jasiah, Ross , Jeramiah, Jasiah, Helen, Dangelo, Jasiah, Dangelo, Skyla, Helen, Elsie, Ross , Madalyn, Kamden, Chaya, Sullivan, Ross , Kaylie, Sullivan, Helen, Ross , Patience, Kaylie, Corey, Kamden, Yusuf, Helen, Hassan, Sullivan, Stella, Chaya, Elsie, Dangelo, Kaylie, Dangelo, Stella, Skyla, Chaya, Helen, Hassan, Yusuf, Corey, Madalyn, Kaylie, Corey, Jasiah, Hassan, Thomas, Corey, Jeramiah, Yamilet, Kamden, Yamilet, Skyla, Madalyn, Yusuf, Yamilet, Jeramiah, Jeramiah, Elsie, Elsie, Skyla, Ross , Sullivan, Yusuf, Helen, Kaylie, Patience, Thomas, Madalyn, Stella, Madalyn, Kaylie, Helen, Jeramiah, Madalyn, Skyla, Tommy, Skyla, Yamilet, Kaylie, Stella, Yusuf, Stella, Chaya, Kamden, Helen, Tommy, Tommy, Jasiah, Skyla, Tommy, Kamden, Chaya, Elsie, Madalyn, Sullivan, Elsie, Stella, Stella, Kaylie, Jeramiah, Ross , Ross , Jeramiah, Elsie, Kaylie, Elsie, Thomas, Yamilet, Sullivan, Hassan, Patience, Skyla, Jeramiah, Kamden, Tommy, Madalyn, Helen, Tommy, Elsie, Kamden, Chaya, Corey, Thomas, Skyla, Dangelo, Kamden, Tommy, Yamilet, Jeramiah, Yusuf, Corey, Patience, Tommy, Skyla, Yusuf, Tommy, Sullivan, Thomas, Madalyn, Tommy, Madalyn, Kaylie, Corey, Madalyn, Jasiah, Elsie, Kaylie, Jeramiah, Skyla, Jeramiah, Jeramiah, Stella, Sullivan, Kamden, Yamilet, Yusuf, Skyla, Madalyn, Dangelo, Jasiah, Sullivan, Jasiah, Elsie, Skyla, Yusuf, Chaya, Skyla, Yamilet, Stella, Yamilet, Elsie, Tommy, Hassan, Kamden, Helen, Sullivan, Kaylie, Ross , Jasiah, Madalyn, Patience, Skyla, Helen, Thomas, Patience, Stella, Jasiah, Hassan, Jeramiah, Dangelo, Yusuf, Yamilet, Stella, Kaylie, Tommy, Yamilet, Kamden, Jeramiah, Thomas, Elsie, Jasiah, Stella, Stella, Skyla, Skyla, Madalyn, Stella, Kamden, Madalyn, Helen, Chaya, Elsie, Elsie, Jeramiah, Sullivan, Tommy, Helen, Chaya, Patience, Dangelo, Thomas, Chaya, Stella, Helen, Patience, Madalyn, Chaya, Thomas, Yamilet, Skyla, Corey, Kaylie, Kamden, Patience, Yamilet, Yamilet, Yamilet, Yusuf, Yamilet, Yamilet, Madalyn, Patience, Skyla, Yusuf, Kaylie, Helen, Yusuf, Patience, Chaya, Jasiah, Hassan, Kaylie, Chaya, Yusuf, Sullivan, Kaylie, Dangelo, Ross , Hassan, Stella, Patience, Elsie, Sullivan, Dangelo, Yamilet, Dangelo, Kaylie, Kaylie, Kamden, Thomas, Ross , Ross , Stella, Kaylie, Thomas, Elsie, Jeramiah, Skyla, Sullivan, Thomas, Kaylie, Yamilet, Jeramiah, Tommy, Hassan, Skyla, Skyla, Kaylie, Ross , Madalyn, Kamden, Madalyn, Jeramiah, Helen, Corey, Yamilet, Ross , Jeramiah, Madalyn, Chaya, Helen,

Ross , Elsie, Helen, Yusuf, Ross , Tommy, Elsie, Jasiah, Thomas, Elsie, Elsie, Chaya, Patience, Jeramiah, Patience, Jeramiah, Ross , Madalyn, Jeramiah, Thomas, Jasiah, Sullivan, Jeramiah, Corey, Yusuf, Helen, Elsie, Helen, Thomas, Thomas, Thomas, Yusuf, Sullivan, Yusuf, Yusuf, Chaya, Kaylie, Tommy, Hassan, Jeramiah, Stella, Jasiah, Patience, Jeramiah, Sullivan, Stella, Skyla, Corey, Dangelo, Helen, Tommy, Elsie, Kamden, Yamilet, Yamilet, Chaya, Jasiah, Kamden, Jasiah

Two Groups

Part 1 of 2 (250 words)

elsie yusuf skyla skyla ross kamden ross madalyn corey kamden chaya chaya kaylie thomas
ross elsie stella thomas kamden elsie corey elsie yamilet helen helen corey dangelo sullivan
ross patience jasiah kamden helen kamden stella patience kamden ross yamilet dangelo skyla
stella jasiah yamilet ross tommy ross helen elsie patience hassan yusuf madalyn chaya stella
stella helen patience chaya stella kaylie kamden elsie kamden hassan kamden dangelo helen
chaya jasiah jeramiah helen jasiah skyla elsie madalyn chaya ross sullivan ross kaylie kamden
helen sullivan chaya dangelo dangelo skyla helen yusuf madalyn corey hassan corey yamilet
yamilet madalyn yamilet jeramiah elsie ross yusuf kaylie thomas stella kaylie jeramiah skyla
skyla kaylie yusuf chaya helen tommy skyla kamden elsie sullivan stella kaylie ross jeramiah
kaylie thomas sullivan patience jeramiah tommy helen elsie chaya thomas dangelo tommy
jeramiah corey tommy yusuf sullivan madalyn madalyn corey jasiah kaylie skyla jeramiah
sullivan yamilet skyla dangelo sullivan elsie yusuf skyla stella elsie hassan helen kaylie jasiah
patience helen patience jasiah jeramiah yusuf stella tommy kamden thomas jasiah stella skyla
stella madalyn chaya elsie sullivan helen patience thomas stella patience chaya yamilet corey
kamden yamilet yamilet yamilet madalyn skyla kaylie yusuf chaya hassan chaya sullivan dan-
gelo hassan patience sullivan yamilet kaylie kamden ross stella thomas jeramiah sullivan kaylie
jeramiah hassan skyla ross kamden jeramiah corey ross madalyn helen elsie yusuf tommy jasiah
elsie chaya jeramiah jeramiah madalyn thomas sullivan corey helen helen thomas yusuf yusuf
chaya tommy jeramiah jasiah jeramiah stella corey helen elsie yamilet chaya kamden

Part 2 of 2 (250 words)

jeramiah chaya thomas jasiah yamilet patience helen hassan sullivan elsie yusuf chaya jeramiah dangelo patience helen skyla hassan kaylie dangelo elsie skyla madalyn sullivan sullivan jasiah dangelo tommy jeramiah jeramiah jeramiah stella patience chaya yusuf kamden jasiah skyla elsie thomas helen kamden jasiah patience chaya thomas madalyn jeramiah sullivan thomas sullivan tommy corey thomas tommy patience patience hassan yusuf patience madalyn yusuf helen elsie dangelo dangelo sullivan madalyn sullivan ross jasiah dangelo dangelo helen ross kamden sullivan kaylie helen patience corey yusuf hassan stella elsie kaylie stella chaya hassan corey kaylie jasiah thomas jeramiah kamden skyla yusuf jeramiah elsie skyla sullivan helen patience madalyn madalyn helen madalyn tommy yamilet stella stella kamden tommy jasiah tommy chaya madalyn elsie stella jeramiah ross elsie elsie yamilet hassan skyla kamden madalyn tommy kamden corey skyla kamden yamilet yusuf patience skyla tommy thomas tommy kaylie madalyn elsie jeramiah jeramiah stella kamden yusuf madalyn jasiah jasiah skyla chaya yamilet yamilet tommy kamden sullivan ross madalyn skyla thomas stella hassan dangelo yamilet kaylie yamilet jeramiah elsie stella skyla madalyn kamden helen elsie jeramiah tommy chaya dangelo chaya helen madalyn thomas skyla kaylie patience yamilet yusuf yamilet patience yusuf helen patience jasiah kaylie yusuf kaylie ross stella elsie dangelo dangelo kaylie thomas ross kaylie elsie skyla thomas yamilet tommy skyla kaylie madalyn madalyn helen yamilet jeramiah chaya ross helen ross elsie thomas elsie patience patience ross jeramiah jasiah jeramiah yusuf elsie thomas thomas sullivan yusuf kaylie hassan stella patience sullivan skyla dangelo tommy kamden yamilet jasiah jasiah

Four Groups

Part 1 of 4 (125 words)

elsie skyla ross ross corey chaya kaylie ross stella kamden corey yamilet helen dangelo ross jasiah
helen stella kamden yamilet skyla jasiah ross ross elsie hassan madalyn stella helen chaya kaylie
elsie hassan dangelo chaya jeramiah jasiah elsie chaya sullivan kaylie helen chaya dangelo helen
madalyn hassan yamilet madalyn jeramiah ross kaylie stella jeramiah skyla yusuf helen skyla
elsie stella ross kaylie sullivan jeramiah helen chaya dangelo jeramiah tommy sullivan madalyn
jasiah skyla sullivan skyla sullivan yusuf stella hassan kaylie patience patience jeramiah stella
kamden jasiah skyla madalyn elsie helen thomas patience yamilet kamden yamilet madalyn
kaylie chaya chaya dangelo patience yamilet kamden stella jeramiah kaylie hassan ross jeramiah
ross helen yusuf jasiah chaya jeramiah thomas corey helen yusuf chaya jeramiah jeramiah corey
elsie chaya

Part 2 of 4 (125 words)

jeramiah thomas yamilet helen sullivan yusuf jeramiah patience skyla kaylie elsie madalyn sullivan dangelo jeramiah jeramiah patience yusuf jasiah elsie helen jasiah chaya madalyn sullivan sullivan corey tommy patience yusuf madalyn helen dangelo sullivan sullivan jasiah dangelo ross sullivan helen corey hassan elsie stella hassan kaylie thomas kamden yusuf elsie sullivan patience madalyn madalyn yamilet stella tommy tommy madalyn stella ross elsie hassan kamden tommy corey kamden yusuf skyla thomas kaylie elsie jeramiah kamden madalyn jasiah chaya yamilet kamden ross skyla stella dangelo kaylie jeramiah stella madalyn helen jeramiah chaya chaya madalyn skyla patience yusuf patience helen jasiah yusuf ross elsie dangelo thomas kaylie skyla yamilet skyla madalyn helen jeramiah ross ross thomas patience ross jasiah yusuf thomas sullivan kaylie stella sullivan dangelo kamden jasiah

Part 3 of 4 (125 words)

yusuf skyla kamden madalyn kamden chaya thomas elsie thomas elsie elsie helen corey sullivan
patience kamden kamden patience ross dangelo stella yamilet tommy helen patience yusuf
chaya stella patience stella kamden kamden kamden helen jasiah helen skyla madalyn ross ross
kamden sullivan dangelo skyla yusuf corey corey yamilet yamilet elsie yusuf thomas kaylie skyla
kaylie chaya tommy kamden sullivan kaylie jeramiah thomas patience tommy elsie thomas
tommy corey yusuf madalyn corey kaylie jeramiah yamilet dangelo elsie skyla elsie helen
jasiah helen jasiah yusuf tommy thomas stella stella chaya sullivan patience stella chaya corey
yamilet yamilet skyla yusuf hassan sullivan hassan sullivan kaylie ross thomas sullivan jeramiah
skyla kamden corey madalyn elsie tommy elsie jeramiah madalyn sullivan helen thomas yusuf
tommy jasiah stella helen yamilet kamden

Part 4 of 4 (125 words)

chaya jasiah patience hassan elsie chaya dangelo helen hassan dangelo skyla sullivan jasiah
tommy jeramiah stella chaya kamden skyla thomas kamden patience thomas jeramiah thomas
tommy thomas patience hassan patience yusuf elsie dangelo madalyn ross dangelo helen kam-
den kaylie patience yusuf stella kaylie chaya corey jasiah jeramiah skyla jeramiah skyla helen
madalyn helen tommy stella kamden jasiah chaya elsie jeramiah elsie yamilet skyla madalyn
kamden skyla yamilet patience tommy tommy madalyn jeramiah stella yusuf jasiah skyla
yamilet tommy sullivan madalyn thomas hassan yamilet yamilet elsie skyla kamden elsie
tommy dangelo helen thomas kaylie yamilet yamilet yusuf patience kaylie kaylie stella dan-
gelo kaylie ross elsie thomas tommy kaylie madalyn yamilet chaya helen elsie elsie patience
jeramiah jeramiah elsie thomas yusuf hassan patience skyla tommy yamilet jasiah

Five Groups

Part 1 of 5 (100 words)

elsie thomas kamden hassan chaya jeramiah elsie hassan corey madalyn corey tommy jasiah
patience patience skyla skyla jasiah tommy jeramiah hassan corey stella hassan kaylie he-
len kamden madalyn jeramiah dangelo madalyn kaylie kaylie hassan dangelo chaya madalyn
thomas yamilet jeramiah ross patience kaylie tommy yusuf tommy kamden elsie ross elsie pa-
tience madalyn chaya kamden corey tommy madalyn elsie jeramiah yusuf sullivan chaya elsie
sullivan patience stella yusuf yamilet jasiah madalyn chaya tommy thomas madalyn corey
yamilet madalyn helen hassan kaylie patience dangelo ross elsie kaylie skyla kamden yamilet
helen ross elsie patience thomas yusuf thomas yusuf jeramiah sullivan helen yamilet

Part 2 of 5 (100 words)

jeramiah skyla patience corey yusuf thomas helen kamden elsie helen jasiah ross jeramiah kamden kamden yamilet helen yamilet thomas elsie sullivan chaya patience chaya madalyn kamden dangelo chaya jasiah skyla kamden sullivan corey sullivan kaylie helen kaylie corey skyla jeramiah sullivan thomas helen skyla stella tommy chaya stella ross thomas skyla helen corey tommy patience sullivan kaylie kaylie stella skyla jasiah skyla tommy kaylie skyla jasiah yamilet kamden stella stella elsie helen chaya chaya kaylie yamilet patience yusuf kaylie dangelo elsie kaylie ross jeramiah yamilet skyla madalyn ross ross tommy elsie jeramiah jasiah helen thomas chaya stella stella tommy chaya

Part 3 of 5 (100 words)

yusuf jasiah ross sullivan chaya dangelo stella kaylie elsie sullivan dangelo jeramiah kamden
chaya kamden elsie stella patience ross sullivan yusuf thomas helen yusuf kamden elsie dangelo
sullivan helen helen chaya helen kamden stella dangelo hassan corey jeramiah madalyn elsie
yusuf madalyn jeramiah yamilet chaya jasiah elsie stella jeramiah yamilet jeramiah tommy
thomas yamilet tommy thomas corey jeramiah sullivan madalyn elsie yamilet hassan ross helen
hassan stella jeramiah stella kamden elsie chaya stella thomas kamden yusuf skyla patience
chaya ross sullivan kaylie stella skyla jeramiah kaylie jeramiah jeramiah elsie elsie chaya ross
sullivan elsie yusuf kaylie jasiah skyla elsie jasiah

Part 4 of 5 (100 words)

chaya ross helen kamden chaya ross skyla elsie skyla helen dangelo patience stella stella jasiah
dangelo kamden ross madalyn patience tommy stella patience stella yusuf hassan sullivan
jasiah dangelo elsie sullivan ross yusuf chaya stella yusuf jasiah yamilet yusuf elsie helen
stella madalyn kaylie kamden skyla madalyn kaylie elsie sullivan kamden elsie skyla jeramiah
skyla madalyn madalyn skyla kamden dangelo skyla stella kamden jasiah thomas jeramiah
kaylie thomas skyla madalyn jeramiah patience helen yamilet patience yamilet yusuf chaya
yusuf hassan dangelo kamden kaylie sullivan tommy ross helen madalyn helen jasiah patience
madalyn jeramiah helen sullivan tommy patience corey kamden kamden

Part 5 of 5 (100 words)

skylar yamilet madalyn elsie kaylie patience thomas dangelo yamilet sullivan sullivan jeramiah
helen yusuf ross thomas jariah chaya helen thomas madalyn tommy patience patience elsie
dangelo helen ross jariah ross ross patience helen elsie skylar corey hassan kamden yamilet
skylar kaylie madalyn skylar stella helen tommy sullivan jeramiah kaylie hassan tommy kamden
dangelo yusuf yusuf tommy jariah jeramiah yamilet jariah yusuf yamilet helen madalyn pa-
tience dangelo tommy elsie skylar helen sullivan dangelo patience skylar yamilet yamilet kaylie
jariah sullivan stella yamilet thomas thomas thomas hassan madalyn corey chaya yusuf thomas
jeramiah jeramiah corey thomas yusuf hassan jeramiah dangelo yamilet jariah

Ten Groups

Part 1 of 10 (50 words)

elsie kamden chaya elsie corey corey jasih patience skyla tommy hassan stella kaylie kamden
jeramiah madalyn kaylie dangelo madalyn yamilet ross kaylie yusuf kamden ross patience
chaya corey madalyn jeramiah sullivan elsie patience yusuf jasih chaya thomas corey madalyn
hassan patience ross kaylie kamden helen elsie thomas thomas jeramiah helen

Part 2 of 10 (50 words)

jeramiah patience yusuf helen elsie jasiah jeramiah kamden helen thomas sullivan patience
madalyn dangelo jasiah kamden corey kaylie kaylie skyla sullivan helen stella chaya ross skyla
corey patience kaylie stella jasiah tommy skyla yamilet stella elsie chaya kaylie patience kaylie
elsie ross yamilet madalyn ross elsie jasiah thomas stella tommy

Part 3 of 10 (50 words)

yusuf ross chaya stella elsie dangelo kamden kamden stella ross yusuf helen kamden dangelo
helen chaya kamden dangelo corey madalyn yusuf jeramiah chaya elsie jeramiah jeramiah
thomas tommy corey sullivan elsie hassan helen stella stella elsie stella kamden skyla chaya
sullivan stella jeramiah jeramiah elsie chaya sullivan yusuf jasiah elsie

Part 4 of 10 (50 words)

chaya helen chaya skyla skyla dangelo stella jasiah kamden madalyn tommy patience yusuf
sullivan dangelo sullivan yusuf stella jasiah yusuf helen madalyn kamden madalyn elsie kamden
skyla skyla madalyn kamden skyla kamden thomas kaylie skyla jeramiah helen patience yusuf
yusuf dangelo kaylie tommy helen helen patience jeramiah sullivan patience kamden

Part 5 of 10 (50 words)

skylar madalyn kaylie thomas yamilet sullivan helen ross jariah helen madalyn patience elsie
helen jariah ross helen skylar hassan yamilet kaylie skylar helen sullivan kaylie tommy dangelo
yusuf jariah yamilet yusuf helen patience tommy skylar sullivan patience yamilet kaylie sullivan
yamilet thomas hassan corey yusuf jeramiah corey yusuf jeramiah yamilet

Part 6 of 10 (50 words)

thomas hassan jeramiah hassan madalyn tommy patience skyla jasiah jeramiah corey hassan
helen madalyn dangelo kaylie hassan chaya thomas jeramiah patience tommy tommy elsie elsie
madalyn kamden tommy elsie yusuf chaya sullivan stella yamilet madalyn tommy madalyn
yamilet helen kaylie dangelo elsie skyla yamilet ross patience yusuf yusuf sullivan yamilet

Part 7 of 10 (50 words)

skylar corey thomas kamden helen ross kamden yamilet yamilet elsie chaya chaya kamden chaya
skylar sullivan sullivan helen corey jeramiah thomas skylar tommy stella thomas helen tommy
sullivan kaylie skylar skylar kaylie jariah kamden stella helen chaya yamilet yusuf dangelo kaylie
jeramiah skylar ross tommy jeramiah helen chaya stella chaya

Part 8 of 10 (50 words)

jasiah sullivan dangelo kaylie sullivan jeramiah chaya elsie patience sullivan thomas yusuf elsie
sullivan helen helen stella hassan jeramiah elsie madalyn yamilet jasiah stella yamilet tommy
yamilet thomas jeramiah madalyn yamilet ross hassan jeramiah kamden chaya thomas yusuf
patience ross kaylie skyla kaylie jeramiah elsie ross elsie kaylie skyla jasiah

Part 9 of 10 (50 words)

ross kamden ross elsie helen patience stella dangelo ross patience stella stella hassan jasiah
elsie ross chaya yusuf yamilet elsie stella kaylie skyla kaylie sullivan elsie jeramiah madalyn
skylar dangelo stella jasiah jeramiah thomas madalyn patience yamilet yamilet chaya hassan
kamden sullivan ross madalyn jasiah madalyn helen tommy corey kamden

Part 10 of 10 (50 words)

yamilet elsie patience dangelo sullivan jeramiah yusuf thomas chaya thomas tommy patience
dangelo ross ross patience elsie corey kamden skyla madalyn stella tommy jeramiah has-
san kamden yusuf tommy jeramiah jasiah yamilet madalyn dangelo elsie helen dangelo skyla
yamilet jasiah stella thomas thomas madalyn chaya thomas jeramiah thomas hassan dangelo
jasiah

Twenty Groups

Part 1 of 20 (25 words)

elsie chaya corey jasiah skyla hassan kaylie jeramiah kaylie madalyn ross yusuf ross chaya
madalyn sullivan patience jasiah thomas madalyn patience kaylie helen thomas jeramiah

Part 2 of 20 (25 words)

jeramiah yusuf elsie jeramiah helen sullivan madalyn jasiah corey kaylie sullivan stella ross
corey kaylie jasiah skyla stella chaya patience elsie yamilet ross jasiah stella

Part 3 of 20 (25 words)

yusuf chaya elsie kamden stella yusuf kamden helen kamden corey yusuf chaya jeramiah thomas
corey elsie helen stella stella skyla sullivan jeramiah elsie sullivan jasiah

Part 4 of 20 (25 words)

chaya chaya skyla stella kamden tommy yusuf dangelo yusuf jasiah helen kamden elsie skyla
madalyn skyla thomas skyla helen yusuf dangelo tommy helen jeramiah patience

Part 5 of 20 (25 words)

skyla kaylie yamilet helen jasiah madalyn elsie jasiah helen hassan kaylie helen kaylie dangelo
jasiah yusuf patience skyla patience kaylie yamilet hassan yusuf corey jeramiah

Part 6 of 20 (25 words)

thomas jeramiah madalyn patience jariah corey helen dangelo hassan thomas patience tommy
elsie kamden elsie chaya stella madalyn madalyn helen dangelo skyla ross yusuf sullivan

Part 7 of 20 (25 words)

skyla thomas helen kamden yamilet chaya kamden skyla sullivan corey thomas tommy thomas
tommy kaylie skyla jasiah stella chaya yusuf kaylie skyla tommy helen stella

Part 8 of 20 (25 words)

jasiah dangelo sullivan chaya patience thomas elsie helen stella jeramiah madalyn jasiah yamilet
yamilet jeramiah yamilet hassan kamden thomas patience kaylie kaylie elsie elsie skyla

Part 9 of 20 (25 words)

ross ross helen stella ross stella hassan elsie chaya yamilet stella skyla sullivan jeramiah skyla
stella jeramiah madalyn yamilet chaya kamden ross jasiah helen corey

Part 10 of 20 (25 words)

yamilet patience sullivan yusuf chaya tommy dangelo ross elsie kamden madalyn tommy hassan
yusuf jeramiah yamilet dangelo helen skyla jasiah thomas madalyn thomas thomas dangelo

Part 11 of 20 (25 words)

kamden elsie corey patience tommy stella kamden madalyn dangelo yamilet kaylie kamden
patience corey jeramiah elsie yusuf chaya corey hassan ross kamden elsie thomas helen

Part 12 of 20 (25 words)

patience helen jasiah kamden thomas patience dangelo kamden kaylie skyla helen chaya skyla
patience stella tommy yamilet elsie kaylie kaylie ross madalyn elsie thomas tommy

Part 13 of 20 (25 words)

ross stella dangelo kamden ross helen dangelo chaya dangelo madalyn jeramiah elsie jeramiah
tommy sullivan hassan stella elsie kamden chaya stella jeramiah chaya yusuf elsie

Part 14 of 20 (25 words)

helen skyla dangelo jasiah madalyn patience sullivan sullivan stella yusuf madalyn madalyn
kamden skyla kamden kamden kaylie jeramiah patience yusuf kaylie helen patience sullivan
kamden

Part 15 of 20 (25 words)

madalyn thomas sullivan ross helen patience helen ross skyla yamilet skyla sullivan tommy
yusuf yamilet helen tommy sullivan yamilet sullivan thomas corey jeramiah yusuf yamilet

Part 16 of 20 (25 words)

hassan hassan tommy skyla jeramiah hassan madalyn kaylie chaya jeramiah tommy elsie madalyn tommy yusuf sullivan yamilet tommy yamilet kaylie elsie yamilet patience yusuf yamilet

Part 17 of 20 (25 words)

corey kamden ross yamilet elsie chaya chaya sullivan helen jeramiah skyla stella helen sullivan
skyla kaylie kamden helen yamilet dangelo jeramiah ross jeramiah chaya chaya

Part 18 of 20 (25 words)

sullivan kaylie jeramiah elsie sullivan yusuf sullivan helen hassan elsie yamilet stella tommy
thomas madalyn ross jeramiah chaya yusuf ross skyla jeramiah ross kaylie jasiah

Part 19 of 20 (25 words)

kamden elsie patience dangelo patience stella jasiah ross yusuf elsie kaylie kaylie elsie madalyn
dangelo jasiah thomas patience yamilet hassan sullivan madalyn madalyn tommy kamden

Part 20 of 20 (25 words)

elsie dangelo jeramiah thomas thomas patience ross patience corey skyla stella jeramiah kam-
den tommy jasiah madalyn elsie dangelo yamilet stella thomas chaya jeramiah hassan jasiah