3.a)

val logfile**=** "bdad17/loudacre/weblog/2014-03-15.log"

val mydata1 **=** sc**.**textFile**(**logfile**)**

val mydata2 **=** mydata1**.**map**(**line **=>** line**.**split**(**' '**)(**2**)).**map**(**line**=>** **(**line**,**1**))**

3.b)

val mydata3 **=** mydata2**.**reduceByKey**(**\_**+**\_**)**

3.c)

val mydata4 **=** mydata3**.**map**(**line **=>** **(**line**.**\_2**,**1**))**

val mydata5 **=** mydata4**.**reduceByKey**(**\_**+**\_**)**

val output1 **=** mydata5**.**map**(**line**=>** "("**+**line**.**\_1**+**":"**+**line**.**\_2**+**")"**)**

OUTPUT **:**

scala**>** output1**.**collect

res28**:** Array**[**String**]** **=** Array**((**4**:**445**),** **(**16**:**17**),** **(**14**:**21**),** **(**6**:**53**),** **(**8**:**39**),** **(**12**:**20**),** **(**18**:**6**),** **(**20**:**3**),** **(**10**:**36**),** **(**2**:**1666**),** **(**3**:**3**),** **(**7**:**1**),** **(**5**:**1**))**

3.d)

val accounts**=** "bdad17/loudacre/accounts"

val mydata6 **=** sc**.**textFile**(**accounts**)**

val mydata7 **=** mydata1**.**map**(**line**=>** **(**line**.**split**(**" "**)(**2**),**line**.**split**(**" "**)(**0**))).**groupByKey**()**

val user\_id\_name **=** mydata6**.**map**(**line**=>(**line**.**split**(**","**)(**0**),**line**.**split**(**","**)(**3**)))**

val mydata8 **=** mydata7**.**join**(**user\_id\_name**)**

val output2 **=** mydata8**.**map**{case** **(**uid**,(**ip**,**name**))** **=>** **(**uid**,**ip**)}**

OUTPUT**:**

scala**>** output2**.**collect

res52**:** Array**[(**String**,** Iterable**[**String**])]** **=** Array**((**178**,**CompactBuffer**(**92.220.107.154**,** 92.220.107.154**,** 196.80.122.253**,** 196.80.122.253**,** 171.115.196.189**,** 171.115.196.189**,** 101.100.183.128**,** 101.100.183.128**,** 179.1.74.59**,** 179.1.74.59**,** 42.37.246.40**,** 42.37.246.40**)),** **(**110253**,**CompactBuffer**(**80.75.149.109**,** 80.75.149.109**)),** **(**20758**,**CompactBuffer**(**80.68.237.84**,** 80.68.237.84**,** 80.68.237.84**,** 80.68.237.84**)),** **(**100870**,**CompactBuffer**(**12.186.235.220**,** 12.186.235.220**,** 92.114.96.155**,** 92.114.96.155**,** 92.114.96.155**,** 92.114.96.155**)),** **(**990**,**CompactBuffer**(**101.50.131.106**,** 101.50.131.106**)),** **(**74203**,**CompactBuffer**(**77.117.127.27**,** 77.117.127.27**)),** **(**28943**,**CompactBuffer**(**163.38.48.251**,** 163.38.48.251**)),** **(**109943**,**CompactBuffer**(**145.197.139.213**,** 145.197.139.213**,** 145.197.139.213**,** 145.197.139.213**)),** **(**126939**,**CompactBuffer**(**70.82.209.7**,** 70.82....