## P. Sai Koushik

PIG:

1.

A = filter finalair by territory == 'United Kingdom';

dump A;

it filters the finalair table by the given condition and here it prints all the values having united kingdom.

```
(5223,University Air Squadron,\N,,UAA,,United Kingdom,N)
5224,University Air Squadron,\N,,UAH,,United Kingdom,N)
(5226,UK HEMS,\N,,HLE,HELIMED,United Kingdom,N)
(5249,UK International Airlines,\N,,UKI,KHALIQ,United Kingdom,N)
(5253,United Kingdom Home Office,\N,,UKP,POLICE,United Kingdom,N)
5306, Veritair Ltd, \N,,BTP, NET RAIL, United Kingdom, N)
5314, Victoria Aviation, \N,, ENV, ENDEAVOUR, United Kingdom, N)
5347, Virgin Atlantic Airways, \N, VS, VIR, VIRGIN, United Kingdom, Y)
5365, Vertair, \N,, VRA, VERITAIR, United Kingdom, N)
5369, Vickers Limited, \N,, VSB, VICKERS, United Kingdom, N)
5395,Warwickshire Aerocentre Ltd.,\N,,ATX,AIRTAX,United Kingdom,N)
5414, West Freugh DTEO, \N,, TEE, TEEBIRD, United Kingdom, N)
5430, Westflight Aviation, \N,, WSL, WEST LINE, United Kingdom, N)
5432,Westland Helicopters,\N,,WHE,WESTLAND,United Kingdom,N)
5444,Williams Grand Prix Engineering,\N,,WGP,GRAND PRIX,United Kingdom,N)
5464,Woodgate Executive Air Charter,\N,,CWY,CAUSEWAY,United Kingdom,N)
5475,Wycombe Air Centre,\N,,WYC,WYCOMBE,United Kingdom,N)
5482,Xclusive Jet Charter Limited,\N,,XJC,EXCLUSIVE JET,United Kingdom,N)
5486,Xjet Limited,\N,,XJT,XRAY,United Kingdom,N)
6860,Dan-Air London,,,DAN,,United Kingdom,N)
(8523,Inter European Airways,,,IEA,,United Kingdom,N)
(10318,Air UK,,UK,\N,,United Kingdom,N)
10334,Suckling Airways,,CB,\N,,United Kingdom,N)
10642,Jc royal.britannica,,,JRB,,United Kingdom,Y)
10646,Birmingham European,,VB,\N,,United Kingdom,N)
13388,Court Line,,??,???,,United Kingdom,N)
13936,Royal European Airlines,,69,\N,,United Kingdom,Y)
16260,AUOS,AUOS,,AUK,AUOS,United Kingdom,N)
16261,CB Airways UK ( Interliging Flights ),,1F,CIF,,United Kingdom,Y)
16881,Air Cudlua,Air Cudlua,,CUD,Cudlua,United Kingdom,Y)
17666,Go Fly (United Kingdom),,,GOE,Go Flight,United Kingdom,N)
(18681,Fly Zoom,,,UKZ,,United Kingdom,N)
19525,BBN-Airways,BlackBurn,,EGH,BBN,United Kingdom,Y)
[19677,Rainbow Air Euro,Rainbow Air EU,RU,RUE,Rainbow Air,United Kingdom,Y)
19808, All Europe, All Europe, N9, N99, United Kingdom, Y)
19811,British Air Ferries,,??,??!,,United Kingdom,N)
arunt>
```

SPLIT finalair into finalair1 if territory=='Mexico', finalair2 if territory=='Canada'; dump finalair1;

It splits the final air table into two new tables for the given condition territory == Mexico and Canada.

```
(5037, Transportacion Aerea De Queretaro, \N,, TQR, TRANSQUERETARO, Mexico, N)
(5081, Transportaciones Y Servicios Aereos, \N,, TTR, TRANSPORTACIONES, Mexico, N)
(5082, Transporte Aereo Tecnico Ejecutivo, \N,,TTS, TECNICO, Mexico, N)
(5088, Taxi Aereo Turistico, \N,,TUO,TURISTICO,Mexico,N)
(5108, Taxi Aereo Cozatl, \N,, TXL, TAXI COZATL, Mexico, N)
(5109, Taxi Aereo de Mexico, \N,, TXM, TAXIMEX, Mexico, N)
(5111, Taxis Aereos de Sinaloa, \N,, TXO, TAXIS SINALOA, Mexico, N)
(5112, Taxirey, \N,, TXR, TAXIREY, Mexico, N)
(5119, Transporte Aereo Ernesto Saenz, \N,, TZE, TRANSPORTE SAENZ, Mexico, N)
(5135, Transporte Ejecutivo Aereo, \N,, EAR, EJECUTIVO-AEREO, Mexico, N)
(5162, Transportacion Aerea Del Mar De Cortes, \N,, MCT, TRANS CORTES, Mexico, N)
(5163, Transporte Aero MGM, \N,, MGM, AERO EMM-GEE-EMM, Mexico, N)
(5165, Transportes Aereos Amparo, \N,, MPO, AMPARO, Mexico, N)
(5167, Transportes Aereos Mexiquenses, \N,, MXQ, MEXIQUENSES, Mexico, N)
(5181, Transportes Aereos Sierra, \N,,RRT, SIERRA ALTA, Mexico, N)
(5185, Transportes Aereos Sierra Madre, \N,, SEI, TRANSPORTE SIERRA, Mexico, N)
(5196, Taxi de Veracruz, \N,, VRC, VERACRUZ, Mexico, N)
(5198, Taxi Aero Del Norte, \N,, XNR, TAXI NORTE, Mexico, N)
(5247,Universal Jet Rental de Mexico,\N,,UJR,UNIVERSAL JET,Mexico,N)
(5278, Uvavemex, \N,, UVM, UVAVEMEX, Mexico, N)
(5299, Vanguardia en Aviacion en Colima, \N,, VGC, VANGUARDIA COLIMA, Mexico, N)
(5305, Verataxis, \N,, VTX, VERATAXIS, Mexico, N)
(5325, Volaris, \N, Y4, VOI, VOLARIS, Mexico, Y)
(5334,VZ Flights,\N,,VFT,ZETA FLIGHTS,Mexico,N)
(5340, VIP Servicios Aereos Ejecutivos, \N,, VIC, VIP-EJECUTIVO, Mexico, N)
(5341, VIP Empresarial, \N,, VIE, VIP EMPRESARIAL, Mexico, N)
(5348, Viajes Ejecutivos Mexicanos, \N,, VJM, VIAJES MEXICANOS, Mexico, N)
(5375, Vuelos Especializados Tollocan, \N,, VTC, VUELOS TOLLOCAN, Mexico, N)
(5376, Vuelos Corporativos de Tehuacan, \N,, VTH, VUELOS TEHUACAN, Mexico, N)
(5381, Vuela Bus, \N,, VUS, VUELA BUS, Mexico, N)
(5481, Xabre Aerolineas, \N,, XAB, AERO XABRE, Mexico, N)
(10715,Click (Mexicana),,QA,\N,,Mexico,Y)
(10955, MexicanaLink,, I6, MXI, LINK, Mexico, Y)
(16724, Red Jet Mexico,, 4X, \N,, Mexico, Y)
(17885,Interjet (ABC Aerolineas),,40,\N,INTERJET,Mexico,Y)
(19807, Regionalia México, Regionalia México, N4, J88, , Mexico, Y)
grunt>
```

## Dump finalair2;

```
(5161, Trans Atlantis, \N,, LTA, LANTRA, Canada, N)
(5292, Vacationair, \N,, VAC, VACATIONAIR, Canada, N)
(5307, Voyageur Airways, \N, VC, VAL, VOYAGEUR, Canada, N)
(5313, VIA Rail Canada, \N, 2R,,, Canada, N)
(5349, Vistajet, \N,, VJT, VISTA, Canada, N)
(5371, Vision Airways Corporation, \N,, VSN, VISION, Canada, N)
(5391,Walsten Air Services,\N,,WAS,WALSTEN,Canada,N)
(5393,Wapiti Aviation,\N,,WPT,WAPITI,Canada,N)
(5396, Wasaya Airways, \N,, WSG, WASAYA, Canada, N)
(5411,West Coast Air,\N,80,,,Canada,Y)
(5415, West Wind Aviation, \N,, WEW, WESTWIND, Canada, N)
(5416, WestJet, \N, WS, WJA, WESTJET, Canada, Y)
(5420, Westcoast Energy, \N,,BLK,BLUE FLAME, Canada, N)
(5425, Western Arctic Air, \N,, WAL, WESTERN ARCTIC, Canada, N)
(5427, Western Express Air Lines, \N,, WES, WEST EX, Canada, N)
(5433, Westpoint Air, \N,, WTP, WESTPOINT, Canada, N)
(5437, White River Air Services, \N,, WRA,, Canada, N)
(5466, World Weatherwatch, \N,,XWW,,Canada,N)
(5469, Worldwide Air Charter Systems, \N,, CSW, CHARTER SYSTEMS, Canada, N)
(5521,Zip,\N,3J,WZP,ZIPPER,Canada,N)
(5523, Zoom Airlines, \N, Z4, OOM, ZOOM, Canada, Y)
(9828, Ciel Canadien,, YC, YCC, Ciel, Canada, Y)
(9829, Canadian National Airways,, CN, YCP, CaNational, Canada, Y)
(10673, CanXpress, ,C1, CA1, CAX, Canada, Y)
(10683, CanXplorer,, C2, CAP,, Canada, Y)
(10735, World Experience Airline, WEA, W1, WE1, WEA, Canada, Y)
(10945, Enerjet,,, ENJ, ENERJET AIR, Canada, Y)
(11922,Worldways,,WG,WGC,,Canada,N)
(14725,Air Atlantic,,9A,\N,Atlantic,Canada,N)
(16110, Harbour Air (Priv), , H3, \N, , Canada, Y)
(16329, Sunwing, , WG, \N, sunwing, Canada, Y)
(16459,Sky Regional,Air Canada Express,RS,\N,Sky Regional,Canada,Y)
(16721, Red Jet Canada,, QY, \N,, Canada, Y)
(16753, Canadian World,, 10, CNN, Canadian, Canada, N)
(19337, Transair,,,TTZ,,Canada,Y)
(19675, Rainbow Air Canada, Rainbow Air CAN, RY, RAY, Rainbow CAN, Canada, Y)
grunt>
```

finalair3 = UNION finalair1, finalair2;

dump finalair3;

```
(5161, Trans Atlantis, \N,, LTA, LANTRA, Canada, N)
(5292, Vacationair, \N,, VAC, VACATIONAIR, Canada, N)
(5307, Voyageur Airways, \N, VC, VAL, VOYAGEUR, Canada, N) (5313, VIA Rail Canada, \N, 2R,,, Canada, N)
(5349, Vistajet, \N,, VJT, VISTA, Canada, N)
(5371, Vision Airways Corporation, \N,, VSN, VISION, Canada, N)
(5391, Walsten Air Services, \N,, WAS, WALSTEN, Canada, N)
(5393, Wapiti Aviation, \N,, WPT, WAPITI, Canada, N)
(5396,Wasaya Airways,\N,,WSG,WASAYA,Canada,N)
(5411, West Coast Air, \N,80,,, Canada, Y)
(5415, West Wind Aviation, \N,, WEW, WESTWIND, Canada, N)
(5416, WestJet, \N, WS, WJA, WESTJET, Canada, Y)
(5420, Westcoast Energy, \N,,BLK,BLUE FLAME, Canada, N)
(5425, Western Arctic Air, \N,, WAL, WESTERN ARCTIC, Canada, N)
(5427, Western Express Air Lines, \N,, WES, WEST EX, Canada, N)
(5433, Westpoint Air, \N,, WTP, WESTPOINT, Canada, N)
(5437,White River Air Services,\N,,WRA,,Canada,N)
(5466,World Weatherwatch,\N,,XWW,,Canada,N)
(5469,Worldwide Air Charter Systems,\N,,CSW,CHARTER SYSTEMS,Canada,N)
(5521,Zip,\N,3J,WZP,ZIPPER,Canada,N)
(5523, Zoom Airlines, \N, Z4, OOM, ZOOM, Canada, Y)
(9828,Ciel Canadien,,YC,YCC,Ciel,Canada,Y)
(9829,Canadian National Airways,,CN,YCP,CaNational,Canada,Y)
(10673, CanXpress,, C1, CA1, CAX, Canada, Y)
(10683, CanXplorer,, C2, CAP,, Canada, Y)
(10735, World Experience Airline, WEA, W1, WE1, WEA, Canada, Y)
(10945, Enerjet, , , ENJ, ENERJET AIR, Canada, Y)
(11922, Worldways, , WG, WGC, , Canada, N)
(14725,Air Atlantic,,9A,\N,Atlantic,Canada,N)
(16110, Harbour Air (Priv), , H3, \N, , Canada, Y)
(16329, Sunwing, , WG, \N, sunwing, Canada, Y)
(16459,Sky Regional,Air Canada Express,RS,\N,Sky Regional,Canada,Y)
(16721,Red Jet Canada,,QY,\N,,Canada,Y)
(16753, Canadian World,, 10, CNN, Canadian, Canada, N)
(19337, Transair,,,TTZ,,Canada,Y)
(19675, Rainbow Air Canada, Rainbow Air CAN, RY, RAY, Rainbow CAN, Canada, Y)
grunt>
```

```
4.
limit_data = LIMIT routes 121;
```

dump limit data;

```
(ZJ,470,BKO,1044,DKK,1084,)
(2J,470,BK0,1044,OUA,246,)
(2J,470,BOY,247,ABJ,253,)
(2J,470,BOY,247,OUA,246,)
(2J,470,C00,245,LFW,298,)
(2J,470,C00,245,OUA,246,)
(2J,470,DKR,1084,BKO,1044,)
(2J,470,DKR,1084,OUA,246.)
(2J,470,LFW,298,OUA,246,)
(2J,470,NIM,280,OUA,246,)
(2J,470,0UA,246,ABJ,253,)
(2J,470,0UA,246,ACC,248,)
(2J,470,0UA,246,BKO,1044,)
(2J,470,0UA,246,BOY,247,)
(2J,470,0UA,246,C00,245,)
(2J,470,0UA,246,DKR,1084,)
(2J,470,0UA,246,LFW,298,)
(2J,470,0UA,246,NIM,280,)
(2K,1338,BOG,2709,GYE,2673,)
(2K,1338,BOG,2709,UIO,2688,)
(2K,1338,CL0,2715,GYE,2673,)
(2K,1338,GYE,2673,BOG,2709,)
(2K,1338,GYE,2673,CL0,2715,)
(2K,1338,GYE,2673,SCY,6045,)
(2K,1338,GYE,2673,UIO,2688,)
(2K,1338,0CC,2670,UI0,2688,)
(2K,1338,SCY,6045,GYE,2673,)
(2K,1338,UIO,2688,BOG,2709,)
(2K,1338,UIO,2688,GYE,2673,)
(2K,1338,UIO,2688,OCC,2670,)
(2L,2750,BDS,1506,ZRH,1678,)
(2L,2750,BOD,1264,ZRH,1678,)
(2L,2750,BRS,490,ZRH,1678,)
(2L,2750,GVA,1665,LPA,1054,)
(2L,2750,LCA,1197,ZRH,1678,)
(2L,2750,LPA,1054,ZRH,1678,)
grunt>
```

## dump group\_data;

```
1), (1x, 4559, 28H, 1078, V72, 193, V), (1x, 4559, 28H, 1078, 276, 2768, V12, 2256, 28H, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1078, 1
```

## Store:

store A into '/home/hduser/output' using PigStorage (',');

hadoop fs -cat /home/hduser/output/part-m-00000

```
2022-04-08 21:21:50,843 WARN util.NativeCodeLoader: Unable to load native-hac
4,2 Sqn No 1 Elementary Flying Training School,\N,,WYT,,United Kingdom,N
8,247 Jet Ltd,\N,,TWF,CLOUD RUNNER,United Kingdom,N
16,Army Air Corps,\N,,AAC,ARMYAIR,United Kingdom,N
52,Avcard Services,\N,,ACC,,United Kingdom,N
59,Air Charter Service,\N,,ACV,,United Kingdom,N
77,Aero Dynamics,\N,,ADL,COTSWOLD,United Kingdom,N
105,Air Atlantique,\N,KI,AAG,ATLANTIC,United Kingdom,N
112, Astraeus, \N, 5W, AEU, FLYSTAR, United Kingdom, Y
138,Air Partner,\N,,ACG,AIR PARTNER,United Kingdom,N
143,Air Data,\N,,AFS,,United Kingdom,N
158,Airfreight Express,\N,,AFX, ,United Kingdom,N
232,A J Services,\N,,AJA,AYJAY SERVICES,United Kingdom,N
269,Albion Aviation,\N,,ALD,ALBION,United Kingdom,N
302,Alan Mann Helicopters Ltd.,\N,,AMH,MANN,United Kingdom,N
311,Aeromedicare Ltd.,\N,,AMQ,LIFELINE,United Kingdom,N
325,Air Navigation And Trading Co. Ltd.,\N,,ANB,AIR NAV,United Kingdom,N
326,Anglo Cargo,\N,,ANC,ANGLO,United Kingdom,N
389,All Charter Limited,\N,,BLA,ALL CHARTER,United Kingdom,N
429,Aravco Ltd.,\N,,ARV,ARAVCO,United Kingdom,N
492,Air Southwest,\N,,WOW,SWALLOW,United Kingdom,Y
508,Aurigny Air Services,\N,GR,AUR,AYLINE,United Kingdom,Y
516,Aviation Beaufort,\N,,AVB,BEAUPAIR,United Kingdom,N
520,AV8 Helicopters,\N,,AVH,KENT HELI,United Kingdom,N
526,Avcorp Registrations,\N,,AVP,AVCORP,United Kingdom,N
565,Air Wales,\N,6G,AWW,RED DRAGON,United Kingdom,Y
565,AD Aviation,\N,,VUE,FLIGHTVUE,United Kingdom,Y
690,Air Foyle,\N,GS,UPA,FOYLE,United Kingdom,Y
802,Archer Aviation,\N,,DHM,ARCHER,United Kingdom,N
818,Airways Flight Training,\N,,DRM,DARTMOOR,United Kingdom,N
B55,Avitat,\N,,ESO,,United Kingdom,N
B60,Air Atlanta Europe,\N,,EUK,SNOWBIRD,United Kingdom,N
```