

BDA-Lab2 report :

Q1 result: (max_temp)

```
part-00000 - Notepad
File Edit Format View Help
Row(year=1975, station_number=86200, max(temperature)=36.099998474121094)
Row(year=1975, station_number=95160, max(temperature)=35.79999923706055)
Row(year=1975, station_number=96550, max(temperature)=35.599998474121094)
Row(year=1975, station_number=106100, max(temperature)=35.5)
Row(year=1975, station_number=75240, max(temperature)=35.400001525878906)
Row(year=1992, station_number=63600, max(temperature)=35.400001525878906)
Row(year=1975, station_number=85220, max(temperature)=35.0)
Row(year=1992, station_number=75240, max(temperature)=35.0)
Row(year=1975, station_number=97190, max(temperature)=35.0)
Row(year=1975, station_number=97390, max(temperature)=35.0)
Row(year=1975, station_number=96350, max(temperature)=35.0)
Row(year=1975, station_number=97200, max(temperature)=35.0)
Row(year=1992, station_number=85040, max(temperature)=35.0)
Row(year=1975, station_number=95350, max(temperature)=35.0)
Row(year=1975, station_number=98040, max(temperature)=35.0)
Row(year=1975, station_number=98210, max(temperature)=35.0)
Row(year=1975, station_number=96030, max(temperature)=35.0)
Row(year=1992, station_number=76000, max(temperature)=35.0)
Row(year=1975, station_number=82110, max(temperature)=34.900001525878906)
Row(year=1975, station_number=98180, max(temperature)=34.900001525878906)
Row(year=1975, station_number=97210, max(temperature)=34.79999923706055)
Row(year=1992, station_number=73990, max(temperature)=34.79999923706055)
Row(year=1975, station_number=95030, max(temperature)=34.79999923706055)
Row(year=1975, station_number=87540, max(temperature)=34.79999923706055)
Row(year=1975, station_number=86330, max(temperature)=34.79999923706055)
Row(year=1975, station_number=86470, max(temperature)=34.79999923706055)
Row(year=1975, station_number=53560, max(temperature)=34.70000076293945)
Row(year=1994, station_number=117160, max(temperature)=34.70000076293945)
Row(year=1975, station_number=86350, max(temperature)=34.70000076293945)
Row(year=1992, station_number=85240, max(temperature)=34.599998474121094)
Row(year=1975, station_number=75040, max(temperature)=34.599998474121094)
Row(year=1975, station_number=78140, max(temperature)=34.599998474121094)
Row(year=1992, station_number=65450, max(temperature)=34.599998474121094)
Row(year=1975, station_number=78240, max(temperature)=34.599998474121094)
Row(year=1975, station_number=96120, max(temperature)=34.5)
Row(year=1994, station_number=76530, max(temperature)=34.5)
Row(year=1975, station_number=97530, max(temperature)=34.400001525878906)
Row(year=1975, station_number=97490, max(temperature)=34.400001525878906)
Row(year=1975, station_number=86480, max(temperature)=34.400001525878906)
Row(year=2010, station_number=75250, max(temperature)=34.400001525878906)
Row(year=1994, station_number=85240, max(temperature)=34.29999923706055)
Row(year=1994, station_number=108110, max(temperature)=34.29999923706055)
Row(year=1992, station_number=75120, max(temperature)=34.29999923706055)
```

Q1_result: (min_temp)

```
part-00000 - Notepad
File Edit Format View Help
Row(year=2010, station_number=95530, min(temperature)=-15.199999809265137)
Row(year=1979, station_number=99090, min(temperature)=-13.100000381469727)
Row(year=1984, station_number=53220, min(temperature)=-12.0)
Row(year=2001, station_number=117160, min(temperature)=-8.0)
Row(year=2010, station_number=89560, min(temperature)=-7.900000095367432)
Row(year=1998, station_number=104390, min(temperature)=-7.5)
Row(year=1986, station_number=84390, min(temperature)=-5.300000190734863)
Row(year=2009, station_number=71140, min(temperature)=-4.900000095367432)
Row(year=1970, station_number=107530, min(temperature)=-4.099999904632568)
Row(year=1951, station_number=149160, min(temperature)=-3.4000000953674316)
Row(year=1955, station_number=65640, min(temperature)=-3.4000000953674316)
Row(year=1957, station_number=65640, min(temperature)=-3.299999952316284)
Row(year=2004, station_number=71140, min(temperature)=-1.600000023841858)
Row(year=2007, station_number=71140, min(temperature)=-1.600000023841858)
Row(year=1966, station_number=81350, min(temperature)=-1.5)
Row(year=2008, station_number=71140, min(temperature)=-0.5)
Row(year=2008, station_number=71500, min(temperature)=-0.20000000298023224)
Row(year=1985, station_number=53220, min(temperature)=-0.20000000298023224)
Row(year=2013, station_number=163950, min(temperature)=-0.1000000149011612)
Row(year=1982, station_number=83210, min(temperature)=-0.20000000298023224)
Row(year=1990, station_number=167860, min(temperature)=-0.800000011920929)
Row(year=2007, station_number=71380, min(temperature)=-1.0)
Row(year=1960, station_number=78630, min(temperature)=-1.100000023841858)
Row(year=1990, station_number=71360, min(temperature)=-1.2999999523162842)
Row(year=1974, station_number=52230, min(temperature)=-1.399999976158142)
Row(year=1990, station_number=71180, min(temperature)=-1.399999976158142)
Row(year=2006, station_number=71140, min(temperature)=-1.5)
Row(year=1990, station_number=71380, min(temperature)=-1.5)
Row(year=1972, station_number=65020, min(temperature)=-1.600000023841858)
Row(year=2000, station_number=55570, min(temperature)=-1.600000023841858)
Row(year=1990, station_number=66040, min(temperature)=-1.600000023841858)
Row(year=2011, station_number=87450, min(temperature)=-1.600000023841858)
Row(year=1990, station_number=77220, min(temperature)=-1.7999999523162842)
Row(year=1990, station_number=52360, min(temperature)=-1.899999976158142)
Row(year=1990, station_number=62190, min(temperature)=-1.899999976158142)
Row(year=1990, station_number=81060, min(temperature)=-2.0)
Row(year=1974, station_number=52550, min(temperature)=-2.0)
Row(year=1992, station_number=52360, min(temperature)=-2.0)
Row(year=1989, station_number=77180, min(temperature)=-2.0)
Row(year=1974, station_number=62030, min(temperature)=-2.0)
Row(year=1979, station_number=81350, min(temperature)=-2.0)
Row(year=1992, station_number=78040, min(temperature)=-2.0)
Row(year=1990, station_number=62030, min(temperature)=-2.0999999046325684)
Row(year=1993, station_number=53220, min(temperature)=-2.299999952316284)
```

Q2:result-1:

```
part-00000 - Notepad
File Edit Format View Help
Row(year=2011, month=7, count=146656)
Row(year=2010, month=7, count=143419)
Row(year=2012, month=7, count=137477)
Row(year=2013, month=7, count=133657)
Row(year=2009, month=7, count=133000)
Row(year=2011, month=8, count=132734)
Row(year=2009, month=8, count=128349)
Row(year=2013, month=8, count=128235)
Row(year=2003, month=7, count=128133)
Row(year=2002, month=7, count=127956)
Row(year=2006, month=8, count=127622)
Row(year=2008, month=7, count=126973)
Row(year=2002, month=8, count=126073)
Row(year=2005, month=7, count=125294)
Row(year=2011, month=6, count=125193)
Row(year=2012, month=8, count=125037)
Row(year=2006, month=7, count=124794)
Row(year=2010, month=8, count=124417)
Row(year=1997, month=7, count=123496)
Row(year=2007, month=7, count=123218)
Row(year=2013, month=6, count=122181)
Row(year=1997, month=8, count=121154)
Row(year=2001, month=7, count=120529)
Row(year=1998, month=7, count=120230)
Row(year=2000, month=7, count=119769)
Row(year=2004, month=7, count=119536)
Row(year=1999, month=7, count=116385)
Row(year=2008, month=8, count=114272)
Row(year=2004, month=8, count=114168)
Row(year=2002, month=6, count=114034)
Row(year=2005, month=8, count=113950)
Row(year=2001, month=8, count=113937)
Row(year=2007, month=8, count=110428)
Row(year=2000, month=8, count=109201)
Row(year=2003, month=8, count=108501)
Row(year=1996, month=8, count=107758)
Row(year=1997, month=6, count=104696)
Row(year=1999, month=6, count=103227)
Row(year=2007, month=6, count=103046)
Row(year=2008, month=6, count=102900)
Row(year=2010, month=6, count=102716)
Row(year=2006, month=6, count=102588)
Row(year=1998, month=8, count=101387)
Row(year=1996, month=7, count=99916)
```

Q2-result_2:

```
part-00000 - Notepad
File Edit Format View Help
Row(year=1975, month=8, count=258)
Row(year=1994, month=7, count=241)
Row(year=1992, month=8, count=241)
Row(year=2010, month=7, count=239)
Row(year=1989, month=7, count=233)
Row(year=1982, month=8, count=233)
Row(year=1988, month=7, count=229)
Row(year=1991, month=7, count=225)
Row(year=1970, month=6, count=225)
Row(year=2006, month=7, count=221)
Row(year=1988, month=6, count=221)
Row(year=1968, month=7, count=220)
Row(year=2000, month=6, count=220)
Row(year=2011, month=6, count=219)
Row(year=2005, month=7, count=219)
Row(year=2008, month=7, count=219)
Row(year=2003, month=7, count=219)
Row(year=1994, month=8, count=218)
Row(year=1986, month=6, count=218)
Row(year=1969, month=8, count=217)
Row(year=1973, month=7, count=217)
Row(year=1966, month=6, count=216)
Row(year=2006, month=6, count=216)
Row(year=2007, month=6, count=215)
Row(year=1979, month=6, count=215)
Row(year=1968, month=6, count=214)
Row(year=2001, month=8, count=214)
Row(year=1955, month=7, count=214)
Row(year=1959, month=7, count=213)
Row(year=2001, month=7, count=213)
Row(year=1969, month=7, count=213)
Row(year=2002, month=8, count=213)
Row(year=1999, month=7, count=213)
Row(year=1997, month=6, count=212)
Row(year=1982, month=6, count=211)
Row(year=1977, month=6, count=211)
Row(year=2009, month=6, count=211)
Row(year=1982, month=7, count=211)
Row(year=1972, month=7, count=210)
Row(year=2008, month=6, count=209)
Row(year=1973, month=6, count=209)
Row(year=1999, month=8, count=208)
Row(year=1986, month=7, count=208)
Row(year=1992, month=7, count=208)
```

Q3-result:

```
part-00000 - Notepad
File Edit Format View Help
Row(year=1980, month=10, station_number=63600, avg(temperature)=11.171794842451046)
Row(year=1981, month=8, station_number=63600, avg(temperature)=16.224861882668172)
Row(year=1982, month=9, station_number=63600, avg(temperature)=13.578531844351179)
Row(year=1975, month=1, station_number=64030, avg(temperature)=10.000000190734863)
Row(year=2003, month=6, station_number=64030, avg(temperature)=16.191666666666666)
Row(year=1981, month=4, station_number=64130, avg(temperature)=13.081250011920929)
Row(year=1987, month=6, station_number=64130, avg(temperature)=13.618292645710271)
Row(year=1999, month=4, station_number=64130, avg(temperature)=11.881818077780984)
Row(year=2001, month=4, station_number=64130, avg(temperature)=12.550000190734863)
Row(year=2006, month=5, station_number=64130, avg(temperature)=13.278048747923316)
Row(year=1998, month=6, station_number=64290, avg(temperature)=14.857647043115952)
Row(year=1979, month=10, station_number=64330, avg(temperature)=12.30000005086263)
Row(year=1958, month=7, station_number=64520, avg(temperature)=17.41739126910334)
Row(year=1960, month=4, station_number=64520, avg(temperature)=12.307692160973183)
Row(year=1960, month=8, station_number=64520, avg(temperature)=15.834065940353897)
Row(year=1995, month=9, station_number=64520, avg(temperature)=13.575000013623919)
Row(year=2004, month=6, station_number=64520, avg(temperature)=13.752083281675974)
Row(year=1971, month=9, station_number=65130, avg(temperature)=13.596666666666667)
Row(year=1977, month=4, station_number=65130, avg(temperature)=10.5)
Row(year=1972, month=6, station_number=65160, avg(temperature)=16.25065574333316)
Row(year=1989, month=10, station_number=65160, avg(temperature)=12.195751648323208)
Row(year=1993, month=3, station_number=65160, avg(temperature)=10.780000114440918)
Row(year=1978, month=3, station_number=65450, avg(temperature)=13.100000381469727)
Row(year=1981, month=5, station_number=65450, avg(temperature)=15.795890559888866)
Row(year=2000, month=4, station_number=65510, avg(temperature)=16.10241550869412)
Row(year=1981, month=6, station_number=75100, avg(temperature)=14.145783148616193)
Row(year=1975, month=10, station_number=75140, avg(temperature)=11.570000076293946)
Row(year=1969, month=5, station_number=75240, avg(temperature)=14.227083245013187)
Row(year=1978, month=10, station_number=75240, avg(temperature)=12.7983327929179)
Row(year=1979, month=12, station_number=75240, avg(temperature)=10.433333396911621)
Row(year=2007, month=8, station_number=75240, avg(temperature)=17.627950253693953)
Row(year=2010, month=11, station_number=75240, avg(temperature)=10.539999961853027)
Row(year=2011, month=3, station_number=75250, avg(temperature)=11.87333222342936)
Row(year=1964, month=7, station_number=75380, avg(temperature)=16.528260852979578)
Row(year=1973, month=8, station_number=75380, avg(temperature)=17.041463409982075)
Row(year=1963, month=7, station_number=75400, avg(temperature)=17.91505375288124)
Row(year=1979, month=5, station_number=75400, avg(temperature)=17.137096774193548)
Row(year=2005, month=10, station_number=75520, avg(temperature)=13.035159812125986)
Row(year=2011, month=6, station_number=75520, avg(temperature)=16.77341771427589)
Row(year=1967, month=9, station_number=76000, avg(temperature)=13.993506481121113)
Row(year=1976, month=10, station_number=76000, avg(temperature)=12.01333320617676)
Row(year=1978, month=7, station_number=76000, avg(temperature)=16.57362329610637)
Row(year=1972, month=5, station_number=76160, avg(temperature)=13.125581297763558)
Row(year=1972, month=7, station_number=76160, avg(temperature)=20.04301073217905)
Ln 1, Col 1 100% Unix (LF) UTF-8
```

Q4-result:

No_result(error):

Q5 result:

```
part-00000 - Notepad
File Edit Format View Help
Row(station_number=75520, year=2002, month=6, avg(Precipitation)=0.09445234708392608)
Row(station_number=75520, year=2010, month=11, avg(Precipitation)=0.07500000000000004)
Row(station_number=86340, year=2011, month=1, avg(Precipitation)=0.05586592178770951)
Row(station_number=86420, year=1999, month=1, avg(Precipitation)=0.10229110512129383)
Row(station_number=75520, year=1996, month=4, avg(Precipitation)=0.0032716927453769564)
Row(station_number=85050, year=2000, month=5, avg(Precipitation)=0.0377358490566038)
Row(station_number=85050, year=2007, month=3, avg(Precipitation)=0.03575268817204303)
Row(station_number=85050, year=2013, month=5, avg(Precipitation)=0.04354838709677421)
Row(station_number=85050, year=2013, month=12, avg(Precipitation)=0.06223118279569901)
Row(station_number=85390, year=2013, month=11, avg(Precipitation)=0.08543371522094931)
Row(station_number=85460, year=2004, month=1, avg(Precipitation)=0.018195050946142648)
Row(station_number=85460, year=2006, month=3, avg(Precipitation)=0.0422192151556157)
Row(station_number=85460, year=2006, month=12, avg(Precipitation)=0.048790322580645175)
Row(station_number=75520, year=1996, month=11, avg(Precipitation)=0.06825396825396829)
Row(station_number=75520, year=1998, month=1, avg(Precipitation)=0.059244264507422456)
Row(station_number=75520, year=1998, month=3, avg(Precipitation)=0.0514986376821799)
Row(station_number=75520, year=1998, month=8, avg(Precipitation)=0.11283783783783774)
Row(station_number=85050, year=2004, month=7, avg(Precipitation)=0.15040322580645152)
Row(station_number=85050, year=2013, month=4, avg(Precipitation)=0.040277777777777794)
Row(station_number=85240, year=2013, month=9, avg(Precipitation)=0.021523178807947015)
Row(station_number=75520, year=2001, month=7, avg(Precipitation)=0.05842391304347829)
Row(station_number=75520, year=2007, month=12, avg(Precipitation)=0.0657258064516129)
Row(station_number=85460, year=2014, month=6, avg(Precipitation)=0.12305555555555555)
Row(station_number=86340, year=1996, month=1, avg(Precipitation)=0.01083676268861453)
Row(station_number=86340, year=2012, month=3, avg(Precipitation)=0.006451612903225804)
Row(station_number=87140, year=2008, month=2, avg(Precipitation)=0.024425287356321844)
Row(station_number=87140, year=2015, month=5, avg(Precipitation)=0.09637096774193549)
Row(station_number=87140, year=2015, month=9, avg(Precipitation)=0.0805555555555559)
Row(station_number=86340, year=1998, month=10, avg(Precipitation)=0.0523809523809527)
Row(station_number=86420, year=2015, month=4, avg(Precipitation)=0.016527777777777773)
Row(station_number=85050, year=2013, month=2, avg(Precipitation)=0.045982142057142895)
Row(station_number=85050, year=2014, month=11, avg(Precipitation)=0.06486111111111123)
Row(station_number=75520, year=2007, month=7, avg(Precipitation)=0.1366935483870967)
Row(station_number=85050, year=2000, month=3, avg(Precipitation)=0.03427419354838711)
Row(station_number=85460, year=2000, month=7, avg(Precipitation)=0.2629101283880171)
Row(station_number=85460, year=2004, month=8, avg(Precipitation)=0.11317204301075263)
Row(station_number=86420, year=2000, month=9, avg(Precipitation)=0.03916083916083918)
Row(station_number=87140, year=2009, month=8, avg(Precipitation)=0.04700272479564033)
Row(station_number=85050, year=2005, month=9, avg(Precipitation)=0.13319892473118278)
Row(station_number=85240, year=2015, month=12, avg(Precipitation)=0.04703947368421053)
Row(station_number=85460, year=2000, month=1, avg(Precipitation)=0.03768506056527593)
Row(station_number=87140, year=2013, month=7, avg(Precipitation)=0.10349462365591394)
Row(station_number=87140, year=2015, month=3, avg(Precipitation)=0.052419354838709686)
Row(station_number=86340, year=1996, month=6, avg(Precipitation)=0.06657101865136301)
Ln 30, Col 87 100% Unix (LF) UTF-8
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