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CPTS 224

Programming tools

**census.awk**

awk 'BEGIN{

HighPopDensity = 0

HighPopCounty = 0

LowPopDensity = 99999

LowPopCounty = 0

HighLandPercent = 0

HighLandCounty = 0

LowLandPercent = 99999

LowLandCounty = 0

}

{

if( $3~/^[0-9]+$/){

print $1" "$2": Population density: " $3/$5 ", Percent water: " ($4/($4+$5))\*100"%"

if($3/$5 > HighPopDensity){

HighPopDensity = $3/$5

HighPopCounty = $1" "$2

}

if($3/$5 < LowPopDensity){

LowPopDensity = $3/$5

LowPopCounty = $1" "$2

}

if($5/($4+$5) > HighLandPercent){

HighLandPercent = $5/($4+$5)

HighLandCounty = $1" "$2

}

if($5/($4+$5) < LowLandPercent){

LowLandPercent = $5/($4+$5)

LowLandCounty = $1" "$2

}

}

else{

print $1" "$2" "$3": Population density: " $4/$6 ", Percent water: " ($5/($5+$6))\*100"%"

if($4/$6 > HighPopDensity){

HighPopDensity = $4/$6

HighPopCounty = $1" "$2" "$3

}

if($4/$6 < LowPopDensity){

LowPopDensity = $4/$6

LowPopCounty = $1" "$2" "$3

}

if($6/($5+$6) > HighLandPercent){

HighLandPercent = $6/($5+$6)

HighLandCounty = $1" "$2" "$3

}

if($6/($5+$6) < LowLandPercent){

LowLandPercent = $6/($5+$6)

LowLandCounty = $1" "$2" "$3

}

}

}

END {

print"Highest population density: ", HighPopCounty ": ", HighPopDensity " People per square mile"

print"Lowest population density: ", LowPopCounty ": ", LowPopDensity " People per square mile"

print"Highest percent land: ", HighLandCounty ": ", HighLandPercent\*100 "% Land"

print"Lowest percent land: ", LowLandCounty ": ", LowLandPercent\*100 "% Land"

}' census.txt

Then do 🡪 chmod u+x census.awk

Then do 🡪 ./census.awk