3.
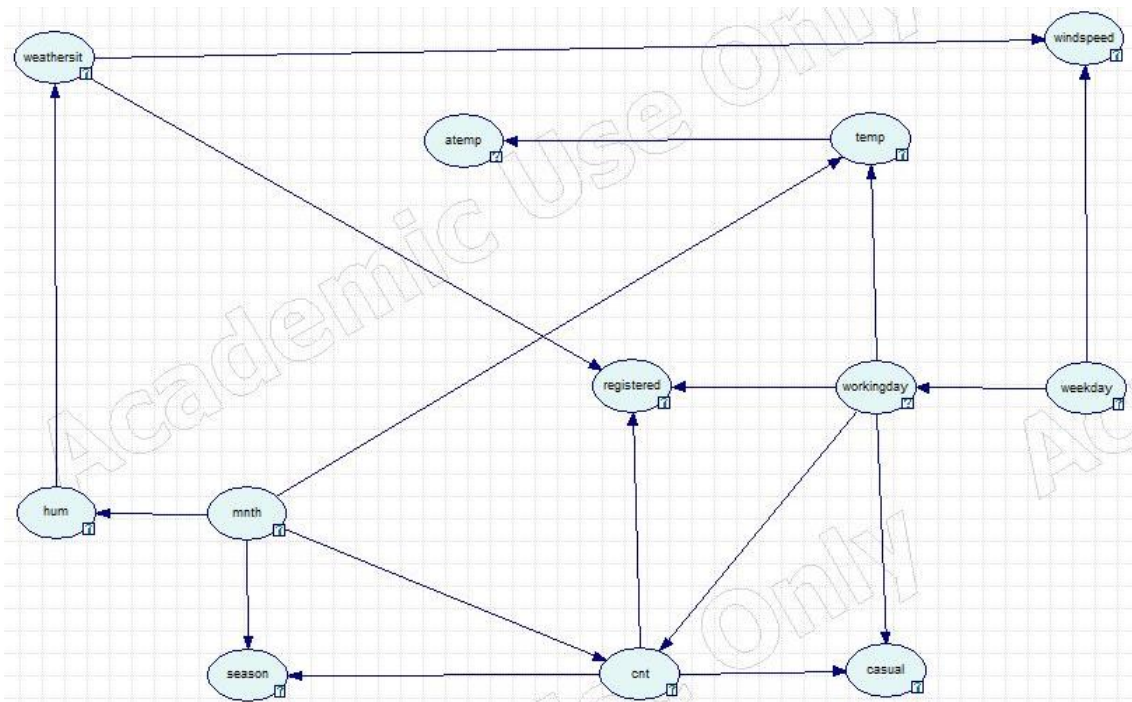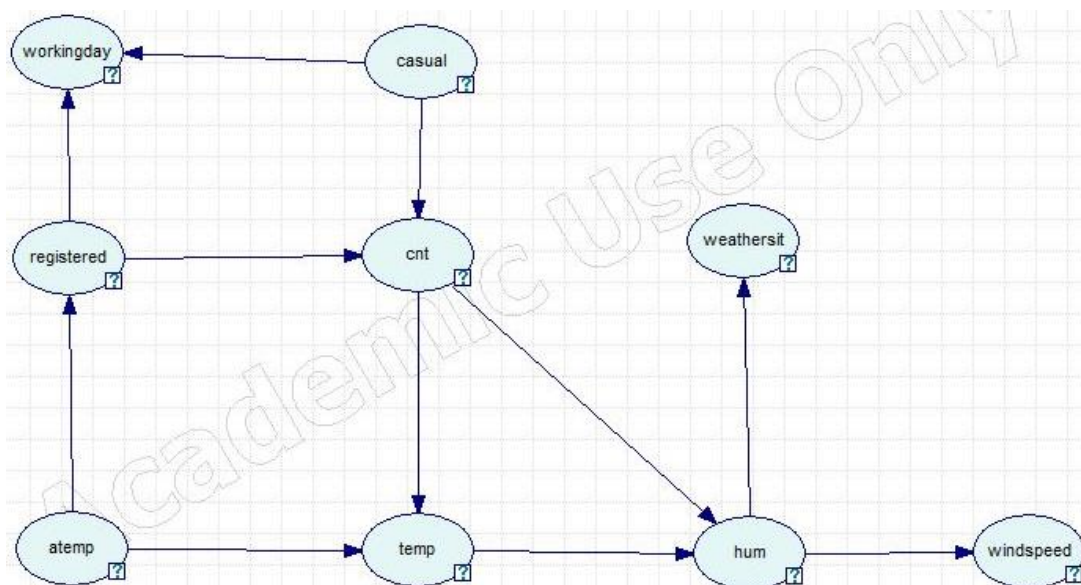
In this part of the report I made several networks with different subsets of the dataset. The network with: weathersit, windspeed, hum, mnth, season, atemp, temp, registered, workingday, weekday, cnt, casual
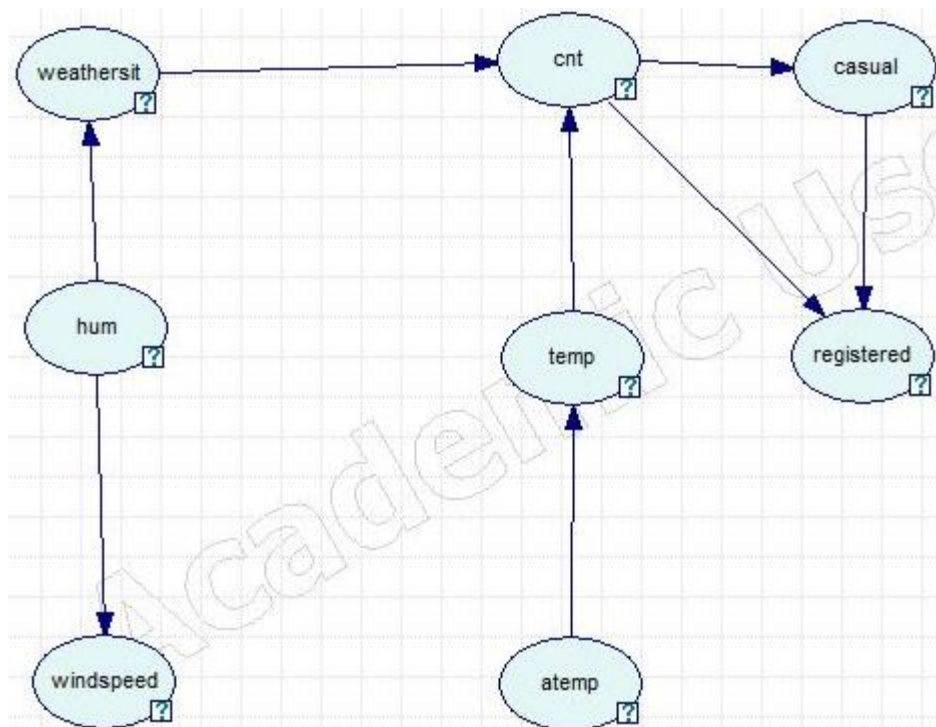

Network with: weathersit, windspeed, hum, atemp, temp, registered, workingday, cnt, casual
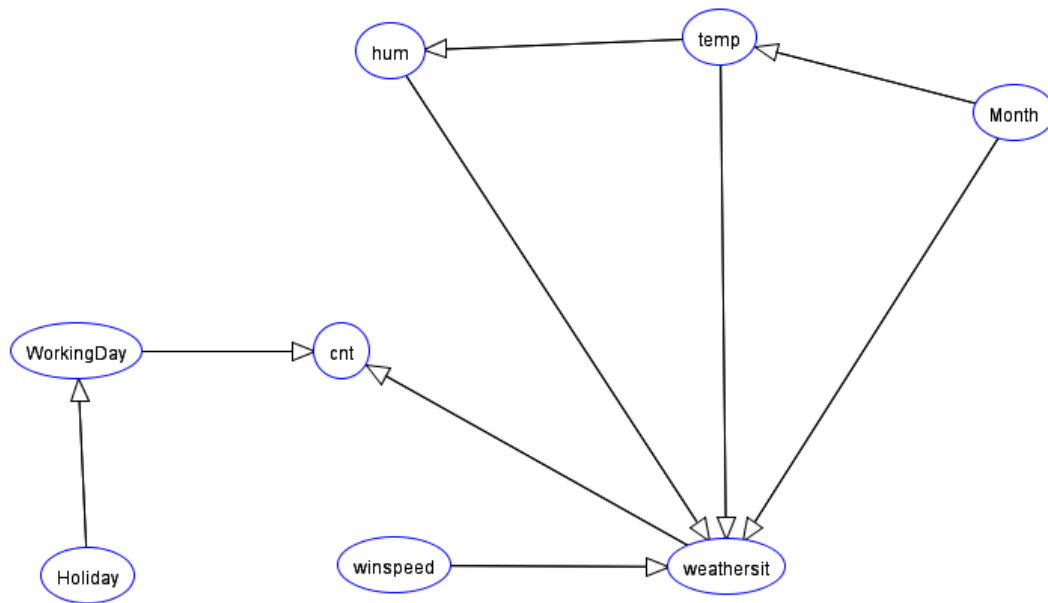
Network with: weathersit, windspeed, hum, atemp, temp, registered, workingday, holiday, cnt, casual
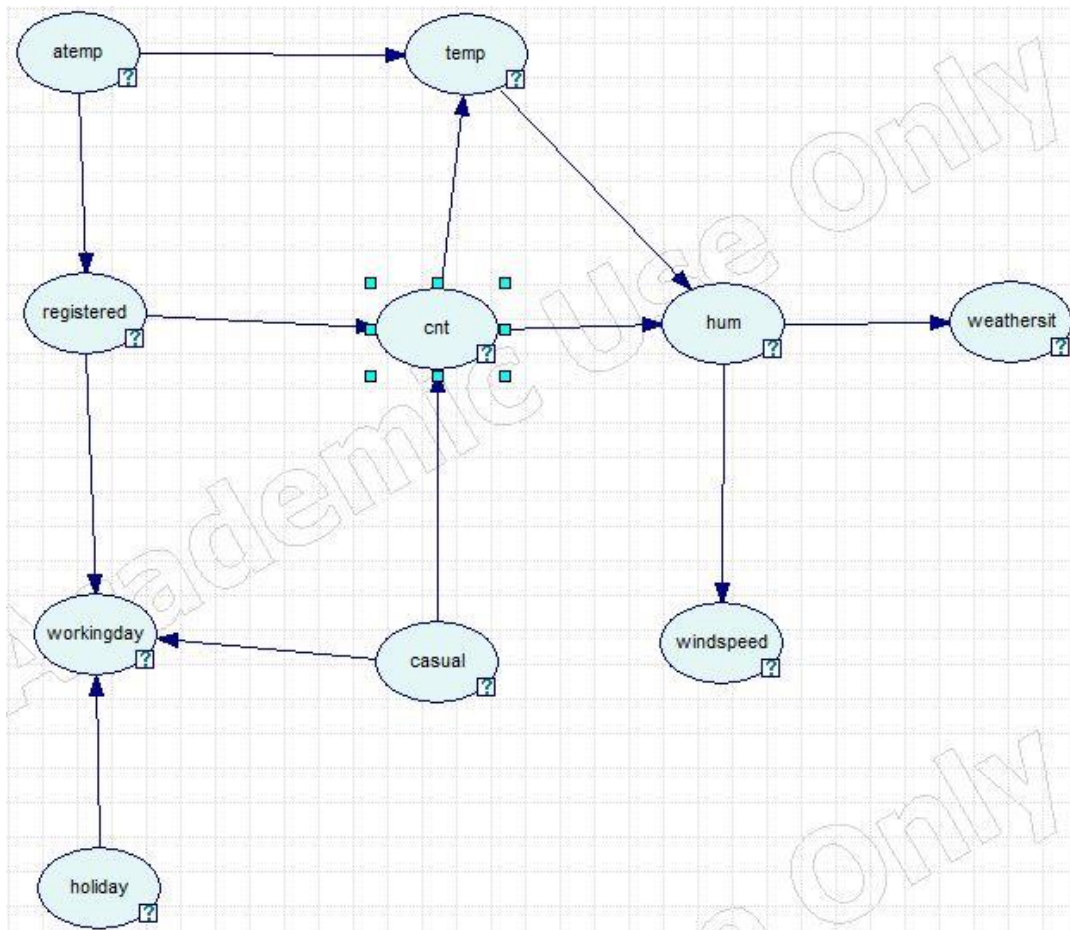
Network with: weathersit, windspeed, hum, atemp, temp, registered, cnt, casual

**4.** The network built in the AISPACE tool was the following:

When we make the observation that the month is between 2-8, we get the following result:

Query Results for Variable temp [Month=2-8]

P (temp = <0.3) = 0.183

P (temp = 0.3-0.5) = 0.319

P (temp = >0.5) = 0.498

We can check that the temperatures are higher here, as expected because in this month we have the Summer, Spring and Fall that are hotter than the Winter.

5. The decision node I added was "Should I go for a run?" this decision node depends on the temperature and if it's a working day or not. The network looks like this now:
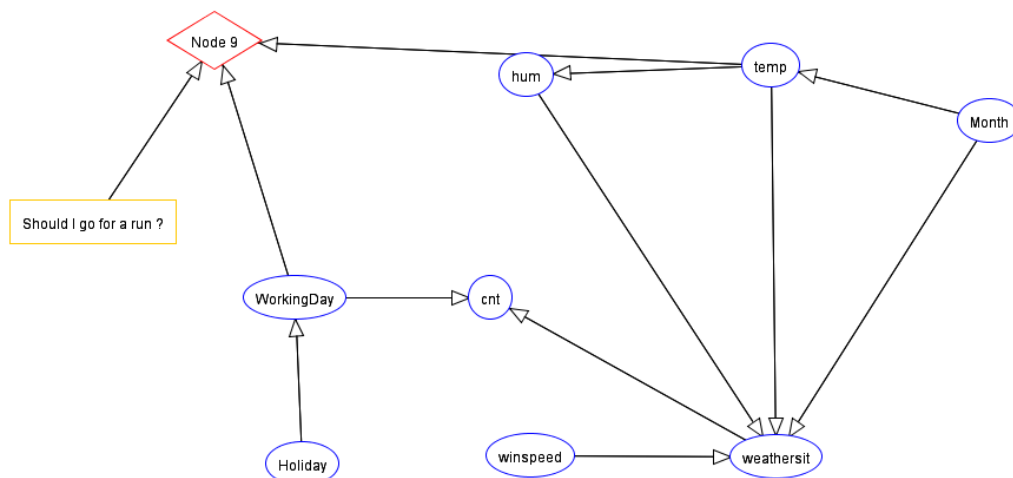
The decision table for the "Should I go for a run?" node is the following:

Should I go for a run ?	WorkingDay	temp	Utility
T	Y	<0.3	0.0
T	Y	0.3-0.5	0.0
T	Y	>0.5	0.0
T	N	<0.3	30.0
T	N	0.3-0.5	50.0
T	N	>0.5	100.0
F	Y	<0.3	100.0
F	Y	0.3-0.5	100.0
F	Y	>0.5	100.0
F	N	<0.3	20.0
F	N	0.3-0.5	0.0
F	N	>0.5	0.0

In this utility table I choose to always run if it isn't a working day.

To obtain the decision made by our network when we set the Working_Day to True we obtain following:
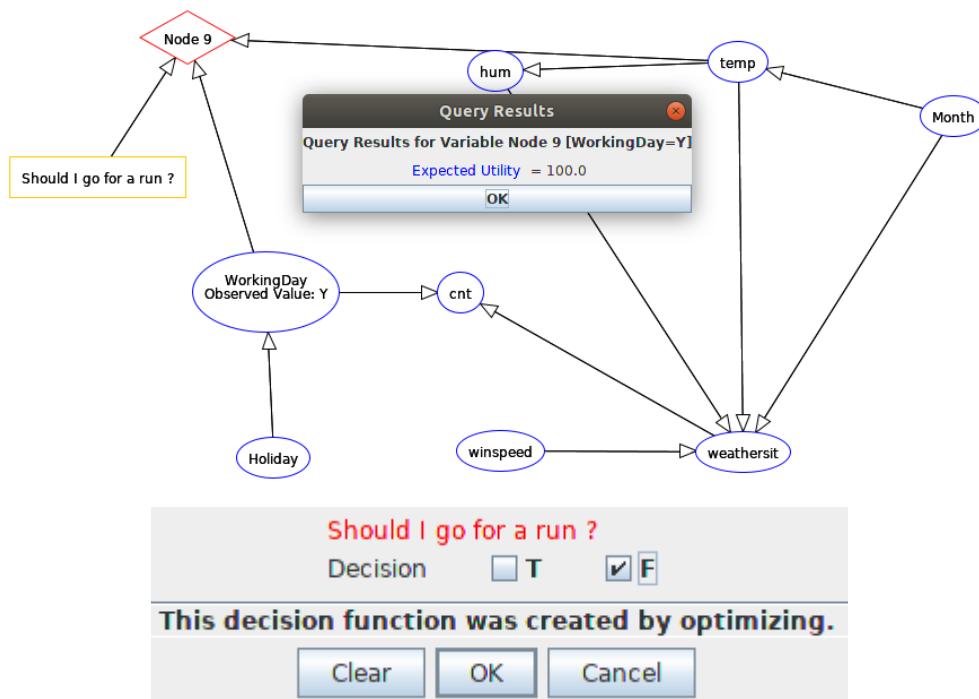
As we can see the decision our network makes is to not go running because it's a working day. This decision is expected according to the utility node distribution.