```
In [21]:  from pgmpy.models import BayesianModel
          from pgmpy.factors.discrete import TabularCPD
          from pgmpy.inference import VariableElimination
```

```
In [16]:  # Model definition
          model = BayesianModel([('E', 'F'), ('E', 'S'), ('F', 'V'), ('S', 'V'
          ), ('V', 'D'), ('S', 'C')])

          # CPDs definition
          cpd_e = TabularCPD(variable='E', variable_card=2, values=[[0.99],[0.0
          1]])
          cpd_f = TabularCPD(variable='F', variable_card=2, values=[[0.9, 0.4],
          [0.1, 0.6]], evidence=['E'], evidence_card=[2])
          cpd_s = TabularCPD(variable='S', variable_card=2, values=[[0.95, 0.2
          ],[0.05, 0.8]], evidence=['E'], evidence_card=[2])
          cpd_d = TabularCPD(variable='D', variable_card=2, values=[[1.0, 0.4],
          [0.0, 0.6]], evidence=['V'], evidence_card=[2])
          cpd_c = TabularCPD(variable='C', variable_card=2, values=[[0.9, 0.25
          ],[0.1, 0.75]], evidence=['S'], evidence_card=[2])
          cpd_v = TabularCPD(variable='V', variable_card=2, values=[[1.0, 0.3,
          0.5, 0.2],[0.0, 0.7, 0.5, 0.8]], evidence=['F', 'S'], evidence_card=[
          2, 2])

          # Adding the CPDs to the model
          model.add_cpds(cpd_e, cpd_f, cpd_s, cpd_d, cpd_c, cpd_v)

          # Model check
          model.check_model()
```

Out[16]: True

```
In [20]:  # Variable elimination
          inf = VariableElimination(model)

          # Perform the query
          query = inf.query(variables=['E'], evidence={'D':1})
          print(query['E'])
```

```
+-----+----------+
| E   |   phi(E) |
|-----+----------|
| E_0 |   0.9248 |
| E_1 |   0.0752 |
+-----+----------+
```

Por lo tanto, la probabilidad de que, dado que un paciente es llevado al doctor, éste no tenga ébola ($P(E = Falso|D = Verdadero)$)) es de **0.9248**.