```
C:\Users\97250\AppData\Local\Programs\Python\Python38\python.exe "C:/Users/97250/
PycharmProjects/Graphical Models/main.py"
Exercise 3 (2x2 lattice):
    Z(temp=1  )  =  121.23293134406595
    Z(temp=1.5)  =  40.922799092745386
    Z(temp=2  )  =  27.048782764334526


Exercise 4 (3x3 lattice):
    Z(temp=1  )  =  365645.74913577037
    Z(temp=1.5)  =  10565.421983514265
    Z(temp=2  )  =  2674.518123060087


Exercise 5 (2x2 lattice):
    Z(temp=1  )  =  121.23293134406595
    Z(temp=1.5)  =  40.922799092745386
    Z(temp=2  )  =  27.048782764334526


Exercise 6: (3x3 lattice)
    Z(temp=1  )  =  365645.7491357704
    Z(temp=1.5)  =  10565.421983514265
    Z(temp=2  )  =  2674.518123060087


Exercise 7: Printing images... (8x8 lattice)
    Printed successfully!


Exercise 8: Calculating empirical expectations (exact sampling)...
    E_(temp=1  )(x11,x22)  =  0.9518
    E_(temp=1  )(x11,x88)  =  0.9114
    E_(temp=1.5)(x11,x22)  =  0.7586
    E_(temp=1.5)(x11,x88)  =  0.5504
    E_(temp=2  )(x11,x22)  =  0.5090
    E_(temp=2  )(x11,x88)  =  0.1462


Exercise 9:
    Calculating empirical mean (Independent method)...
        E_(temp=1  )(x11,x22)  =  0.9342
        E_(temp=1  )(x11,x88)  =  0.5514000000000023
        E_(temp=1.5)(x11,x22)  =  0.7492000000000013
        E_(temp=1.5)(x11,x88)  =  0.3855999999999991
        E_(temp=2  )(x11,x22)  =  0.5222000000000021
        E_(temp=2  )(x11,x88)  =  0.10839999999999993
    Calculating empirical mean (Ergodicity method)...
        E_(temp=1  )(x11,x22)  =  0.9531726907630519
        E_(temp=1  )(x11,x88)  =  0.9080321285140559
        E_(temp=1.5)(x11,x22)  =  0.7699598393574285
        E_(temp=1.5)(x11,x88)  =  0.5459437751004027
        E_(temp=2  )(x11,x22)  =  0.504979919678714
        E_(temp=2  )(x11,x88)  =  0.10987951807228893


Exercise 10: Printing images...
    Printed successfully!



Total runtime: 7 minutes and 11 seconds.


Process finished with exit code 0
```