Quiz 6

1. Why is branch prediction important in modern machines?
   1. Branches are frequent and without prediction, the stall time required would cripple performance.

2. Describe the basic 2-bit predictor.

3. Give two mechanism for predicting the destination of jumps.
   1. BTB
   2. Return stack predictor

4. Define the two types of locality.
   1. Spatial -- The program accesses data it accessed recently
   2. Temporal -- the program accesses data near data it accessed recently

5. What is the goal of a cache?
   1. To use a combination of small, fast memories and large, slow memories to create the appearance of a large, fast memory.