[Music]

Welcome to the last video lecture for week four, and as always this lecture is some preparations for the assignments for this week. As always we group the assignments into 2 groups, questions based more directly on the video lectures and then questions that are at least to some extent based also on extra material. So if we turn to Group one first, you can see here that these questions or assignments follows pretty closely the structure of the lectures for the week, so there is one week on each of the lecture themes but we will stick to ten questions here altogether, so we have decided to have two questions on the instance-based learning theme, which is the maybe the densest lecture with respect to content this week. And as you probably have understood my principle here is to through the assignments, highlight for you some of the important points during the week. So for generalization as search, it's the question how our generalization takes place, in this case in a depth-first search, in the second lecture focuses on how the entropy is measured as one of the important measures used to guide the buildup on decision tree. So for instance based learning as one question related to the distance measures used in many of the instance based learning algorithms, and finally there is one question related to the kernel related methods. Finally for clustering there is one question focused on hierarchical clustering technique. Concerning the recommended extra readings you have by now discovered that I systematically try to recommend to you most cases some original articles, key articles for each of the themes. What I want to say here is that these key articles sometimes is both of course original because if they are of core importance for development of each methodology, in some cases they are also very readable, in some cases are not so readabl,e so I guess you will discover that and even though some of them are not so readable and you shouldn't feel that you have to read everything in this extra recommended reading to satisfy the requirements for this course. I mean it's but still I will stick to try to give you the original articles I mean it's so easy for this area of machine learning to just go and search on the net for various documents, so you can get various documents and you can judge yourself or they are readable a lot, my contribution here is mainly to point at the original work, which it may be not always so easy to do yourself. So for so for this week I recommend you one article by Tom Mitchell, an early key article on generalization as search. So for decision trees algorithm I recommend you an article by Rose Quinlan was one of the key persons in this development called induction of decision trees. For instance based learning you get a particle by HART, very early article which was one of

the starting point for this technique, the nearest neighbor patent classification technique. And for the second you also get a second article there for that theme by another well-known researcher Vladimir Vapnik on support vector networks. And finally you get one article on clustering techniques, an early article from 1967, MacQueen between regarding some methods of classification analysis or multivariate observations. Let us finally turn to the questions in group two and as you see they are also spread across the four themes, with two questions on the instance based learning and hopefully these questions will also highlight for you some of the key points in the lectures you have followed this week. So this was the end of this short tutorial on the assignments for week four, thanks for your attention. The next week of the course will have the following theme theory based learning based on symbolic representations.