?External requirement The system shall implement patient privacy provisions as set out in HStan-03-2006-priv.External requirements ?Chapter 4 Requirements engineering 4 Requirements abstraction (Davis) "If a company wishes to let a contract for a large software development project, it must define its needs in a sufficiently abstract way that a solution is not pre-defined. The requirements must be written so that several contractors can bid for the contract, offering, perhaps, different ways of meeting the client organization's needs. Once a contract has been awarded, the contractor must write a system definition for the client in more detail so that the client understands and can validate what the software will do. Both of these documents may be called the requirements document for the system."Chapter 4 Requirements engineering 17 Examples of nonfunctional requirements in the MHC-PMS Product requirement The MHC-PMS shall be available to all clinics during normal working hours (Mon-Fri, 0830-17.30).Requirements which are a consequence of organisational policies and procedures e.g. process standards used, implementation requirements, etc.Requirements which arise from factors which are external to the system and its development process e.g. interoperability requirements, legislative requirements, etc.It may range from a high-level abstract statement of a service or of a system constraint to a detailed mathematical functional specification.A structured document setting out detailed descriptions of the system's functions, services and operational constraints.Chapter 4 Requirements engineering 6 User and system requirements Chapter 4 Requirements engineering 7 Readers of different types of requirements specification Chapter 4 Requirements engineering 8 Functional and non-functional requirements ?Process requirements may also be specified mandating a particular IDE, programming language or development method.Chapter 4 Requirements engineering 14 Types of nonfunctional requirement Chapter 4 Requirements engineering 15 Non-functional requirements implementation ?Non-functional requirements may affect the overall architecture of a system rather than the individual components.For example, to ensure that performance requirements are met, you may have to organize the system to minimize communications between components.Organizational requirement Users of the MHC-PMS system shall authenticate themselves using their health authority identity card.The requirements themselves are the descriptions of the system services and constraints that are generated during the requirements engineering process.Statements in natural language plus diagrams of the services the system provides and its operational constraints.Constraints on the system from the domain of operation Chapter 4 Requirements engineering 9 Functional requirements ?Chapter 4 Requirements engineering 10 Functional requirements for the MHC-PMS ?Ambiguous requirements may be interpreted in different ways by developers and users.These define system properties and constraints e.g. reliability, response time and storage requirements.A single non-functional requirement, such as a security requirement, may generate a number of related functional requirements that define system services that are required.Requirements which specify that the delivered product must behave in a particular way e.g. execution speed, reliability, etc.Chapter 4 Requirements engineering 12 Requirements completeness and consistency ?Consistent ??????????????????????