Lately, object-relational databases have become increasingly popular. Compared to the traditional approach, they provide many new possibilities. This thesis describes the general requirements on object-relational systems and the new object-relational enhancement of Oracle, as well as similar enhancements of other well-known database systems and their comparison with the SQL: 1999 database standard requirements. An essential part of this thesis is concerned with the comparison of the relational and object-relational in1pJementation of the student information system using the Oracle 9i database server.