COMP1204: Database Theory and Practice Coursework

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1 ERD and Normalisation

1.1 EX1 - Relation

```
HotelReview(
  Author:String,                Date:Date,
  HotelID:Integer,              URL:String,
  AveragePrice:Integer,         Content:String,
  Overall:Integer,              OverallRating:Integer,
  BusinessService:Integer,      CheckIn:Integer,
  Cleanliness:Integer,          Rooms:Integer,
  Service:Integer,              Value:Integer,
  NoReaders:Integer,            NoHelpful:Integer
)
```

1.2 EX2 - Functional Dependencies

Author	Date	HotelName	→	Content	OverallRating	BusinessService	CheckIn
				Cleanliness	Rooms	Service	Value
				NoReaders	NoHelpful		
HotelID			→	URL	Overall	AveragePrice	

1.3 EX3 - Normalised Relations

```
Hotel(
  HotelID:Integer,
  HotelName:String,
  URL:String,
  Overall:Integer,
  AveragePrice:Integer
)
Review(
  ReviewID:}textbfInteger,
  Author:String,
  Date:Date,
  HotelID:Integer,
  Content:String,
  OverallRating:Integer,
  BusinessService:Integer,
  CheckIn:Integer,
  Cleanliness:Integer,
  Rooms:Integer,
  Service:Integer,
  Value:Integer,
  NoReaders:Integer,
  NoHelpful:Integer
)
```

1.4 EX4 - ERD Model

2 Relation Algebra

2.1 EX5 - Finding a user's reviews

2.2 EX6 - Finding users with more than two reviews

2.3 EX7 - Finding all hotels with more than 10 reviews

2.4 EX8 - Finding all hotels with overall rating and cleanliness

3 SQL

3.1 EX9 - Creating HotelReviews Table

3.2 EX10 - Creating a SQL insert script

3.3 EX11 - Creating Normalised Tables

3.4 EX12 - Populating Normalised Tables

3.5 EX13 - Creating Indexes

4 Date Retrieval and Analysis

4.1 EX14 - Relational Algebra to SQL

5 Conclusions