## Case Study 1 - Ads for sale

A commercial television channel sells advertising (ad) time to business customers.

Each ad has a duration, target audience and advertising agency, as well as a brand name (of the customer who is advertising it), a certification from the censor, a duration and a suitability rating (0 to 10) to each target audience (e.g. under-fives, over-18s, etc).

The channel categorises ads and regions by target audience – under 5s, under 13s, insomniacs, regular TV viewers, etc. This allows them to schedule so that certain ads will be shown only in certain time slots to target a particular audience.

The channel matches up the ad with their schedule. Every day is mapped out into regions – breakfast TV, mid-morning TV, lunchtime TV, afternoon TV, teatime TV, pre-watershed TV (before 9), early post-watershed TV, night time TV, etc. The rates (cost per minute) for ads depend on the region. Each region is defined by a start time and an end time.

At the start of each season, the channel administrator enters the program schedule for the season. Each program is entered by name, date and time, along with its target viewing audience.

Each region of the day (i.e. lunchtime, teatime, etc.) has a number of designated daily slots for ads. These slots are three-minute slots between programs. Each slot can house several ads. The ad slot has a date, day of the week, time, daytime region / special, program before and program after. Each slot can be free, partially allocated or allocated. Slots are updated and marked as ‘expired’ after they have been shown.

The ad slots around this are set up initially as being free. As ads are allocated to it, the amount of free time in the slot goes down by the duration of the ad (i.e .if there were 3 mins free, and a 30 sec ad is allocated, only 2mins 30sec remain free).

Ad time is always bought through the advertising agency that makes the ad. Details of advertising agents are stored (agent name, agent email, agent address). When an agent asks for an ad contract, he/she specifies the client and the date of the contract creation is stored. As well as the client information (client name, client email, client description, agent for client) the agent specifies for each client ad, the start date, number of runs and the daytime region. The agent then picks a set of slots for the ad which are allocated to the ad and the price of the slots is calculated, based on the daytime region it is scheduled in.

The client is billed for the ads *before* they are shown – i.e. when they are booked. The client is given a ‘payment due date’ by which date payment must come in for the contract. If it does not come in, those slots are freed up and the client booking is deleted.

The bill is made out to the client and lists the slots booked with a cost per slot. The ad agency gets 5% of the cost of the bill and this is added onto the end of the bill, before VAT is calculated.

The following is a list of ads that have been scheduled:

|  |  |  |
| --- | --- | --- |
| ***Ad Bookings*** | | |
| **Programme Code:** PG01  **Client Code:** CN01  **Agent code:** AG01  **Agent Name:** Innovative Advertising | **Programme Name:** Downton Abbey  **Client Name:** Proctor and Gamble  **Start Date of Ad:** 04/10/2015  **Duration of Ad Run:** 4 weeks | **Day:** Sunday  **Start Time:** 21:00  **End Time:** 22:00  **Ad Duration:** 1 min 30 secs  **Cost minute for slot:** 20000  **Contract date:** 01/07/2015  **Payment due date:** 01/08/2015 |
| **Programme Code:** PG02  **Client Code:** CN02  **Agent code:** AG02  **Agent Name:** Creative Ads for Kids | **Programme Name:** Peppa Pig  **Client Name:** Smyths Toys  **Start Date of Ad:** 06/07/2015  **Duration of Ad Run:** 10 weeks | **Day:** Monday to Friday  **Start Time:** 11:00  **End Time:** 11:30  **Ad Duration:** 30 secs  **Cost minute for slot:** 2000  **Contract date:** 01/01/2015  **Payment due date:** 01/05/2015 |
| **Programme Code:** PG03  **Client Code:** CN02  **Agent code:** AG02  **Agent Name:** Creative Ads for Kids | **Programme Name:** X Factor  **Client Name:** Smyths Toys  **Start Date of Ad:** 29/08/2015  **Duration of Ad Run:** 10 weeks | **Day:** Saturday  **Start Time:** 19:30  **End Time:** 21:30  **Ad Duration:** 1 min  **Cost minute for slot:** 50000  **Contract date:** 01/01/2015  **Payment due date:** 01/02/2015 |

## Case Study 2 - Games Galore

A computer games shop called ‘Games Galore’ sells electronic games that run on different PC platforms. The platforms are specific to PCs, with different operating systems and accessories. Some of the games can run on several platforms. They buy games from several suppliers and store details about the suppliers including their name, email, phone contact and names of sales representatives of that supplier.

When a supplier is promoting a new game, the supplier informs the shop, giving the details of the game. The shop keeps an on-line catalogue of games that customers can browse through on a PC in the store. For each game the name, release date, the platform it runs on, the age group it is suitable for and a short description is stored. This is available for customers to view. In addition the shop stores details of the supplier who supplies the game, the cost price per game and the number of copies of each game he has in stock. The sale price of each game is the cost price plus 40%. When a customer buys a copy of a game the quantity of copies of that game in stock is decreased by one.

To place an order with a supplier, the shop identifies the games to be ordered and adds the quantity of each that he wants. A date and order number is included on the order and it is stored in the shop database. Each game has only one supplier, but a supplier can supply several games. When the order is delivered, the delivery date is recorded and the quantity in stock of each of the games that has come in is updated.

The games shop has a panel of reviewers who review the games that the shop stocks. Only authorised reviewers can add a review. Each reviewer has a username and password, and an e-mail address. When he/she wants to add a review, he/she logs on to the system, picks the game to be reviewed and types in the review text. The date the review was entered is stored with the review. Many reviewers can review a game and a reviewer can review many games. Each reviewer can only review a game once. Each game is classified in relation to the age group it suits. If customers want to know more about the classification, they can look up a classification list. This gives the classification as it appears on the game (e.g. 11+), a description of the skills required by the intended player in this category (e.g. motor movements, deductive reasoning skills), a description of what is allowed by this level (some violence) and a description of what is explicitly excluded from a game at this level (e.g. extreme violence, offensive language). The platforms on which the game can run are also detailed. Each platform has a processor speed, the amount of disk space required by the game, the CD-ROM speed, the video card and the operating system.

The following is a list of reviews that have been posted against one of the games:

