

Business Studies 2000

P 19-5
JAL
p13q5

2. What is meant by a *critical path*? [5 marks]

The village bakery has asked you to advise them about setting up a web site, including a trading function.

- Draw up project plan, illustrated by a Gantt chart and indicate the critical path [5 marks]
- Make an estimate of the costs involved, and estimate how much working capital you would need. [5 marks]
- What other advice would you give them? 5 marks

In a project plan the *Critical Path* is the longest sequence of dependent activities that lead to the completion of the plan..

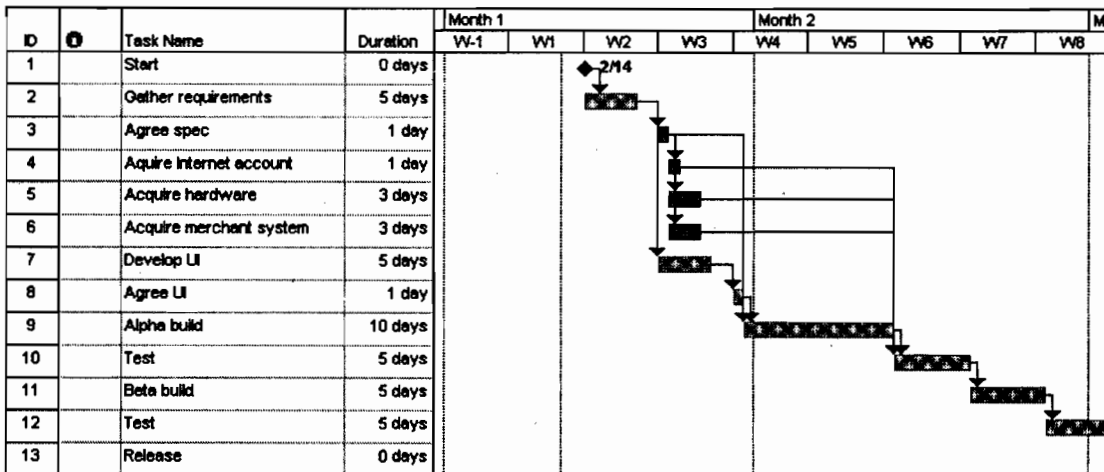
The critical path defines the shortest time in which a project can be completed

Any delay of a task on the critical path will delay completion of the whole plan

a)

Start	Project start
Gather requirements	Initial Discussions with the client
Agree spec	Agree approach and functionality with client
Acquire Internet account	Standard ISP account
Acquire hardware	PC etc for client's use
Acquire merchant system	Probably facility provided by ISP; use client's existing credit card processing
Develop UI	Graphical style
Agree UI	Agree look with client
Alpha build	Say about 20 pages at ½ day/page plus photos and order form,
Test	Test the site; check with client; process dummy transactions
Beta build	Make corrections required
Test	Test and check again
Release	Finish

After-care and maintenance will also be needed



Critical path in red

b)

	Days	Cost/day	Total
Analyst/web page author	48	300	14400
Graphic Design	6	500	3000
Hardware			2000
Total			19400

Maintenance/running costs:	Per month
ISP/telephony	100
Maintenance say 12% p.a	194
Depreciation - say 60 months	323
Monthly cost	617

Assume 50% is paid up-front and 50% on completion then approximately £10K or working capital would be needed

Alternatively based on 10% on signature, and monthly payments, paid on 30 days thereafter

Income

	Month1	Month2	Month 3
Start	10%	1940	
End Month 1		7740	
End month 2			9720
Expenditure	8600	10800	
Cash at end	-6660	-9720	0

Again about £10K working capital.

c) Assuming the bakery's profit is about 10% of turnover, the web pages will need to generate an extra £6000 of business each month. At, say, £10 for a cake, this means selling an extra 600 cakes a month or 30 per working day. Hard, but possible, but may require increase in production. Better means of distribution, such as overnight courier services may also be required

Customer details may require registration under the Data Protection Act.

Other factors, such as increased publicity and reduction of seasonal effects may help justify the cost.

Web pages do not exist, or work in isolation. The baker will need to do other things to guide people to his web-site, for example by including the URL in conventional advertising.

Introducing the Internet to a conventional business may trigger more far-reaching changes than just a new order-taking system. Although for a small producer the order taking system may simply print manual, paper based orders, as the business grows consideration may be given to for example, automatic stock control systems, just-in-time ordering systems, and upgraded accounting and information systems such as customer lists and a recipe database.. Supplies, such as flour, may possibly be ordered advantageously via the 'net'. The net gives access to a wider range of suppliers and equipment manufacturers, as well as specialist discussion groups, both professional and amateur, for example mailing lists devoted to particular sorts of bread recipes. The business, potentially, stops being local and has a global marketplace.