

Q24 a) Madison could use the checksum error detection method when transmitting the data from one location to another. This involves adding up the digits in each packet of data that is sent, & then sending this calculation with the data. When the packet is received, the checksum is used to determine if the packet of data arrived properly & is the same as when it was sent. Another method is a parity bit. This is an extra bit that is added to each packet of data, which makes the packet either odd or even, depending on which parity is agreed upon. This method is not entirely accurate, as errors can still occur & go undetected, however, this simple method can still pick up a lot of errors, because if the arriving packet is not odd or even, depending on which is used, then the packet has to be sent again as an error would have been detected.

b) Data mining is a very effective way in which patterns & other useful information can be found. This involves checking the data for links or patterns to certain items

of individuals, which can be very helpful in marketing. If a known product is selling well in a certain area, then the company could use a specific advertising campaign of that product, to that area. Data mining, while not always 100% accurate, is ~~definitely~~ definitely a new method that if applied to Madison, would have very beneficial effects.

Furthermore, the new trend of selling data to a data warehouse could benefit Madison. Data warehouses collect huge amounts of data from a variety of sources. ~~They can use~~ Data Warehouses can use this data ~~for~~ in a host of ways, helping them determine spending habits in certain areas, as well as determining which areas provide the most profit. Madison could quite possibly gain a fair bit of money if they decided to sell their data to a 3rd party data warehouse.

c) This message is an example of ~~an~~ someone discriminating against someone else, who doesn't have the ability to find out about this discrimination. Therefore, this raises the

very important issue of whether internal company email ~~is not~~ should be able to be checked & read by company directors. While individuals do have a right to privacy & of communicating with each other in private, they also have the responsibility to ensure that a company email system is only used for work related purposes. If this email was shown to John, the consequence would be disastrous for him as well as for Pat & Sam. Therefore, extreme care must be taken when sending personal messages through an internal, company email system, especially when they are of a derogatory nature. Strict rules must therefore be imposed on all internal email, so that it is only used for business messaging & also to ensure that staff members who don't have access to the email system are not discriminated against.