

Faculty of Computer Studies TM112

Introduction to Computing and Information Technology 2



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INTRODUCTION

In this report, I'm going to walk through many ideas of Data loss prevention, I will write about its definition, rules and I will search for intentional and unintentional data loss themes then show some general causes of data loss.

DATA LOSS PREVENTION (DLP)

We can **define** (DLP) as a set of tools and processes used to ensure that sensitive data is not lost, misused, or accessed by unauthorized users.

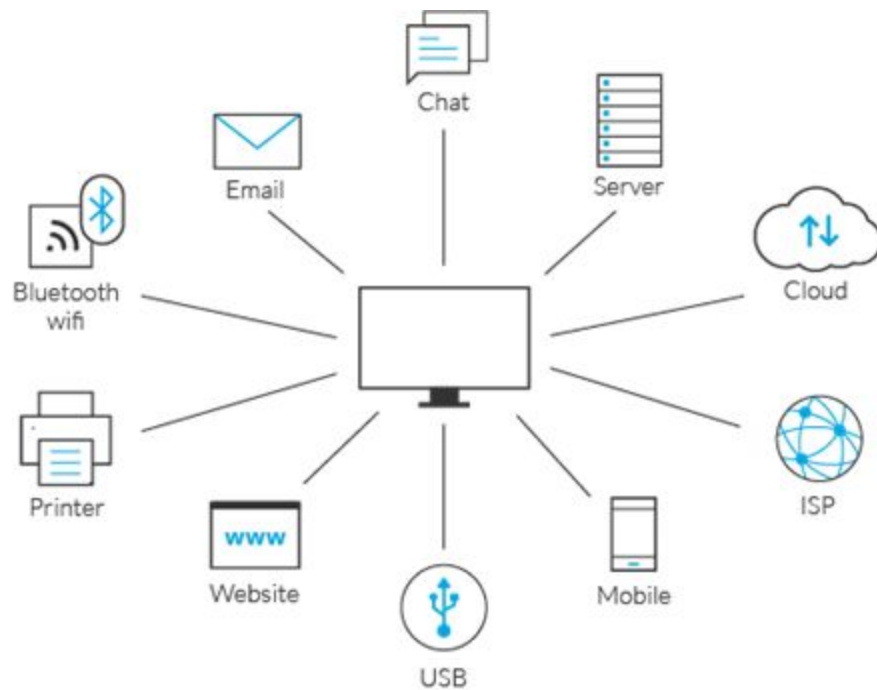


Figure 2: DLP: Preventing data loss from various sources

DLP has a core **role** in the discipline in a full-spectrum cybersecurity plan. We use it to protect data from loss from ransomware or exfiltration to maintain productivity and prevent data breaches.

we can display lists of data we may protect with DLP such as

- **Intellectual Property:** Design documents, project plans
- **Corporate Data:** Financial records and statements, Employee records
- **Customer Data:** End-user logins, Social security numbers

Common unintentional data loss themes

There are **three common unintentional** data loss themes, which are **people**, **technology** and **process**. These themes often capture the reasons data loss occurs, particularly unintentional data loss. I perform them with common, **recurring root causes** for data loss in the below tablet.

People	Process	Technology
• Lack of awareness	• Lack of data usage policies	• Lack of flexibility in remote connectivity
• Lack of accountability	• Lack of data usage monitoring	• No content-aware DLP tools
Lack of user responsibility for their actions	Lack of data transmission procedures	Lack of secure communication platforms

Table: Common unintentional data loss themes

So let's **discuss briefly three general causes** of data loss.

- **Deleting files accidentally**

The top risk of losing data is deleting files or parts of texts without having any backups available. That happens accidentally when we delete wrong files or overwrite the parts we did not intend.

- **Viruses and damaging malware**

Being connected to a worldwide network has some disadvantages such as viruses affect operational software, and causing damages for stored data and loss it.

- **Mechanical damages of hard drive**

There are so many moving parts inside of hard drives that it is no wonder they break down so easily and causing a loss of data stored it.

So we need to use **Common Techniques for Data Loss Prevention** such as

- Encryption
- Cryptographic hashing
- Encoding
- Data fingerprinting (read, hash and store)

CONCLUSION

- Understanding DATA LOSS PREVENTION (DLP) helps us use it to ensure that sensitive data is not lost, misused, or accessed by unauthorized users.
- DLP strategies must include solutions that monitor to detect and block the unauthorized flow of information.

REFERENCES

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3. <https://www.varonis.com/blog/what-is-data-loss-prevention-dlp/>
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Question 2:

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- **Algorithm**

=====

> Produce graph for the drawing board

>> Set up the position to zero

Set position at position zero

>>Produce the x axis

Set length of x to 180

>>Produce the y axis

Set length of y to 150

>>Plot the data

Make a list of month

Make a list of sales

Iterate through the length of the list

Go to each position in two lists (month * 15, sales)

Draw a red dot in each position

Write the number of the month

End iterate

>>Hide the turtle prompt

hide the turtle prompt

- **Python code:**

```
=====

#Produce graph for the drawing board

from turtle import *

#Set up the position to zero

setpos(0,0)

#Produce the x axis

goto(180,0)

goto(0,0)

#Produce the y axis

goto(0,150)

goto(0,0)

#Plot the data

month= [1,2,3,4,5,6,7,8,9,10,11,12]

sales= [120,110,80,66,66,45,40,20,45,75,95,130]

for i in range(len(sales)):

    goto(month[i]*15,sales[i])

    dot(5,"red")

    write(month[i], False, "center", "bold")

#Hide the turtle prompt

ht()
```

Thonny - C:\Users\USER\Desktop\112 TMA\Nancy Al Aswad Q2-Produce graph for the drawing board.py @ 17:45

File Edit View Run Device Tools Help

Nancy Al Aswad Q2-Produce graph for the drawing board.py ×

```
1 #Produce graph for the drawing board
2 from turtle import *
3 #Set up the position to zero
4 setpos(0,0)
5 #Produce the x axis
6 goto(180,0)
7 goto(0,0)
8 #Produce the y axis
9 goto(0,150)
10 goto(0,0)
11 #Plot the data
12 month= [1,2,3,4,5,6,7,8,9,10,11,12]
13 sales= [120,110,80,66,66,45,40,20,45,75,95,130]
14 for i in range(len(sales)):
15     goto(month[i]*15,sales[i])
16     dot(5,"red")
17     write(month[i], False, "center", "bold")
18 #Hide the turtle prompt
19 ht()
20
```

Shell ×

Python 3.7.5 (bundled)

```
>>> %cd 'C:\Users\USER\Desktop\112 TMA'
>>> %Run 'Nancy Al Aswad Q2-Produce graph for the drawing
>>> %Run 'Nancy Al Aswad Q2-Produce graph for the drawing
>>>
```

Python Turtle Graphics

Month	Sales
1	120
2	110
3	80
4	66
5	66
6	45
7	40
8	20
9	45
10	75
11	95
12	130