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Subject : Information security
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Q1

Ans The different types of vulnerabilities are:

- Cross-site Request forgery (CSRF)
- SQL injection
- Command injection
- Cross site scripting

• Cross-site Request forgery (CSRF) :-

The cross site request forgery is forged request came from the cross site. The CSRF attacks trick site users or administrators to unknowingly perform malicious actions for the attacker.

• ~~the vulnerable objects~~

- user profile page
- change order values and product prices
- change user passwords to hijack accounts

• SQL injection :-

SQL injection vulnerabilities refers to areas in website where direct user input is passed to a database. inject - occurs when the user input is sent to an interpreter as a part of malicious command or query and trick.

→

the interpreter into executing unintended commands and gives access to unauthorized data

- injecting malicious/ spam posts into a site
- Stealing customer information
- URLs interacting with the database

• Command injection :-

In command injection vulnerabilities allow attackers to remotely pass and execute code on the webserver hosting server. Command injection attacks are particularly critical because they can allow bad actors to initiate the following :-

- Hijack an entire site
- Utilize the hijacked server in botnet attacks

• Cross site scripting :-

Cross site scripting is also shortly known as XSS.

It occurs when attackers inject scripts through untrusted user input or other fields on a website to execute code on the site.

- Session hijacking
- Spam content being distributed to unsuspecting visitors.

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Q2

Ans

```
#include <stdio.h>
#include <string.h>
#include <ctype.h>

int main()
{
    int i, j, len1, len2, numstr[100], numkey[100],
    numcipher[100];
    char str[100], key[100], cipher[100];
    printf("Enter plain text\n");
    gets(str);
    for (i=0; j=0; i<strlen(str); i++)
    {
        if (str[i] != ' ')
        {
            str[j] = toupper(str[i]);
            j++;
        }
    }
    str[j] = '\0';
    for (i=0; i<strlen(str); i++)
    {
        numstr[i] = str[i] - 'A';
    }
    printf("Enter the key\n");
    gets(key);
```

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Manisha

```
for (i=0; j=0; i<strlen(key); i++)
```

```
{  
    if (key[i] != ' ')
```

```
        key[j] = tolower(key[i]);  
        j++;
```

```
}
```

```
key[j] = '\0';
```

```
for (i=0; i<strlen(key); i++)
```

```
{  
    numkey[i] = key[i] - 'A';  
}
```

```
for (i=0; i<strlen(str); i++)
```

```
{  
    numcipher[i] = numstr[i] + numkey[i];  
}
```

```
for (i=0; i<strlen(str); i++)
```

```
{  
    if (numcipher[i] > 25)
```

```
{  
        numcipher[i] = numcipher[i] - 26;
```

```
}
```

```
}
```

```
printf("One time pad cipher text is \n");
```

```
for (i=0; i<strlen(str); i++)
```

Amisha

```
{  
    printf ("%c", (numalphas[i] != 'A'));  
}  
    printf ("\n");  
}
```

Vishka

C:\Users\Rockstar\OneDrive\Documents\ot.exe

```
Enter a string text to encrypt  
one time pad  
Enter key string of random text  
perfect  
One Time Pad Cipher text is  
ORVYMOX!G+
```

```
-----  
Process exited after 12.69 seconds with return value 0  
Press any key to continue . . .
```

Type here to search

Taskbar and system tray area showing various icons (Start, Search, File Explorer, Edge, Chrome, etc.) and system information (29°C, 11:43, 17-06-2021).

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Q4

Ans password management :

The password is a set of string

password management is the process of securing and managing passwords throughout their life cycle from creation of closure by adhering to a set of sustainable practices. The role of password management comes in handy then. It is a set of principle and practices to be followed by users while storing and managing password efficiently in an efficient manner.

- Different type of password management software are :-
- Keepass :- It is a free and open source software which helps you in storing passwords in a single database, accessible using a master password.
- Password safe :- password safe is a simple and highly secure password management software which works using MS - windows platform with the help of software.

Marisha

Enpass :- It is an open source software which is compatible with multiple devices like desktop, mobile, tablet etc.

Bitwarden :- It is an open source password management software, which allows anyone to review audit, and contribute its code base freely. It includes powerful sharing features in a business organization or families for personal use.

Passaro :- Passaro is a self-hosted password manager meant for teams. It allows multi-level encryption including client side encryption layers.

Anika