Answer 1 —

Most Common Website Security Vulnerabilities are :-

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1. <u>SQL Injections</u> — A type of web application security vulnerability in which an attacker attempts to use app. code to access or corrupt database content.

2. <u>Cross Site Scripting (XSS)</u> — It targets an application users by injecting code usually a client-side script such as Java Script.

3. **Broken Authentication & Session Management** —

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encompass several security issues, all of them having to do with maintaining the identity of a user.

4. **Insecure Direct object References** —

Exposes a reference to an internal implementation object.

5. **Security Misconfiguration** — It encompasses several types of vulnerabilities all centered on a lack of maintaince/attentention.

6. **Cross-Site Request Forgery (CSRF)** —

Is a malicious attack where a user is tricked into performing an action that they didn't intend to do.

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```
// obtaining numerical one time
   pad (OTP) as key
   for (i = 0; i < strlen (key); i++)
   {
       numkey [i] = key [i] - 'A';
   }
       for (i = 0; i < strlen (str); i++)
       {
           num cipher [i] = num str [i] + numkey [i];
       }
// To loop the numbers within 25 ie, if
addition of numster and key is 27 then
num cipher should be 1
       for (i = 0; i < strlen (str); i++)
       {
           if (num cipher [i] > 25)
           {
               numcipher [i] = num cipher [i] - 26;
           }
       }
```

Answer 4

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Passwords are the set of strings provided by users at the authentication prompts of web account.

Passwords still remain as one of the most secure methods of authentication avaible to date, they are subjected to a number of security threats when mishandled. There are many challenges in securing passwords in this digital era. When the no. of web services used by individuals are increasing year over year on one end.

☆ **Online tools** **Are** —

1. **LastPass** — It offers unlimited password storage on multiple devices. LastPass is the only free password manager that offers password sharing, 2FA compatibility, etc.

print ("One Time Pad ciphers Test"); | Konark Singhal

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for (i=0; i< strlen (str); i++)
{
print ("%c", (str[i] + 'A'));
print ("%c", c); (num cipher [i] + 'A'));
}
print ("\n");
}

is \n");

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```
str[j] = '\0';
// obtaining numerical plain text
en A-0, B-1, C-2
for (i=0; i< strlen(str); i++)
{
    number[i] = str[i] - 'A';
}

printf("Enter Key string of Random
                        text\n");

gets(key);
for (i=0; j=0; i< strlength(key); i++)
{
    if (key[i] != ' ')
    {
        key[j] = toupper(key[i]);
        j++;
    }
}

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

Answer 2

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```c
# include <stdio.h>
# include <string.h>
# include <ctype.h>
main()
{

// All the text which ever entered is
converted to upper & without spaces
    int i, j, len1, len2, num str [100], numkey
    [100], num ciphur [100];
    char str [100], key [100], ciphur [100];
    printf ("Enter a string text to encrypt \n");
    gets (str);
    for (i=0, j=0; i < str length (str); i++)
    {
        if ( str [i] != ' ')
        {
            str [j] = toupper (str [i]);
            j++;
        }
    }
```
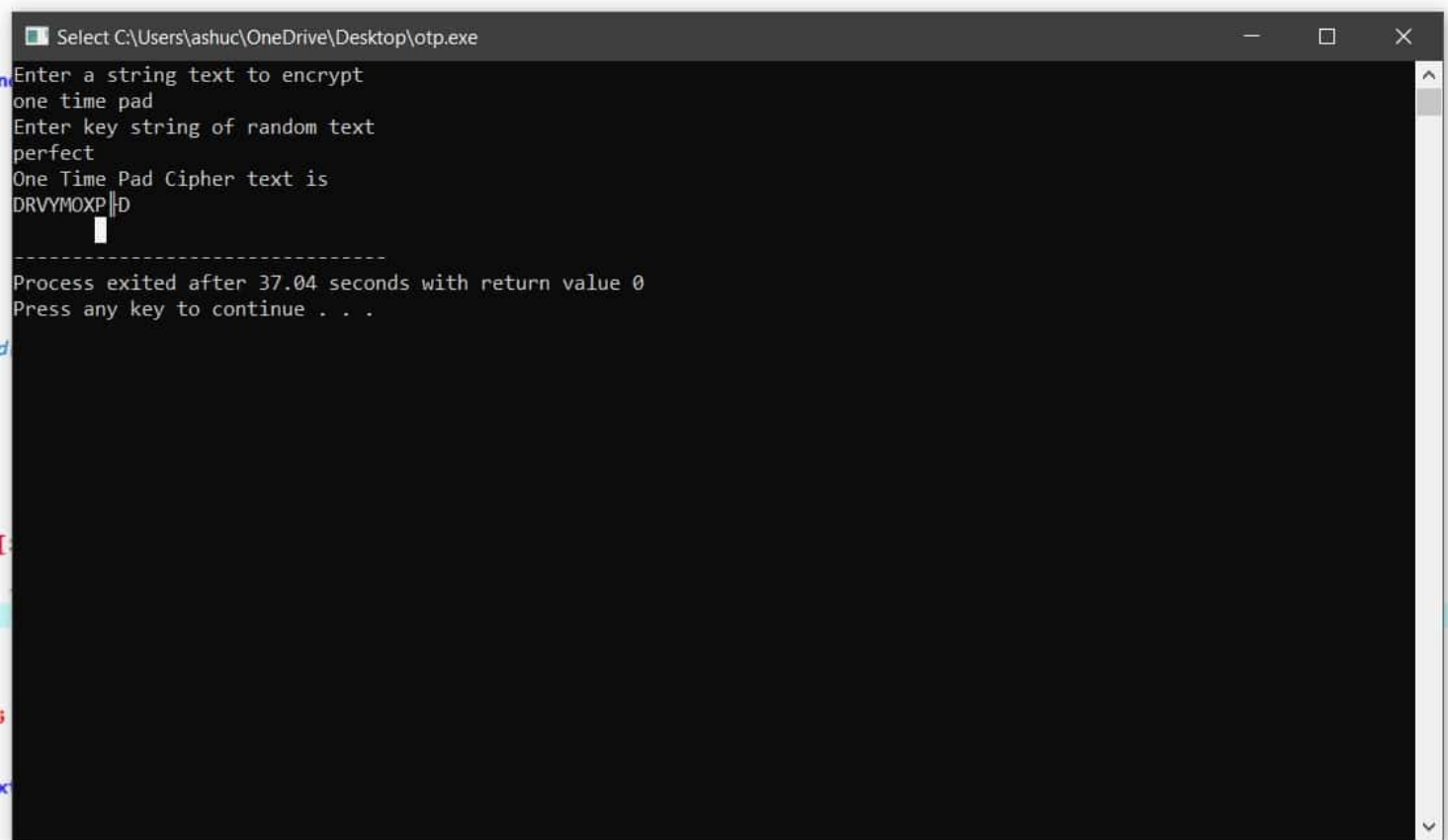
Select C:\Users\ashuc\OneDrive\Desktop\otp.exe

```
Enter a string text to encrypt
one time pad
Enter key string of random text
perfect
One Time Pad Cipher text is
DRVYMOXP D

--------------------------------
Process exited after 37.04 seconds with return value 0
Press any key to continue . . .
```