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Lab 11-post lab

1.

```
//import useful libraries...
#include <stdio.h>
#include <string.h>

int main()
{
char password[25]; //declare char array for storing the password...
int points = 100,len; //declare initially points = 100...
int lower_count = 0,upper_count=0,num_count=0,consecutive_count = 0;
printf("Enter the password: ");
scanf("%s",password); //Tae password from the user...

len = strlen(password); //check the length of the password...

/*-----Check the missing lower case in the password-----*/
for(int i=0;i<len;i++)
{
if(password[i] >= 'a' && password[i] <= 'z')
{
lower_count += 1;
}
}

if(lower_count <= 0)
{
points -= 20; //decrease points by 20...
}
/*-----End of checking the missing lower case in password----*/

/*-----Check the lack of apital latter in the password-----*/
for(int i = 0;i<len;i++)
{
if(password[i] >= 'A' && password[i] <= 'Z')
{
upper_count += 1;
}
}
```

```
if(upper_count < 2) //we take minimum two Uppar case later want in password...
{
points -= 20; //decrease points by 20...
}
/*-----End of the checking the lack of capital latters in the password-----*/

/*----check the number is present in the password-----*/
for(int i = 0;i<len;i++)
{
if(password[i] >= '0' && password[i] <= '9')
{
num_count += 1;
}
}

if(num_count <= 0)
{
points -= 20; //decrease points by 20...
}
/*-----End of the checking the numbers in the password-----*/

/*-----Check the consecutive characters in the password-----*/
for(int i=0;i<len;i++)
{
for(int j = i+1;j<len;j++)
{
//check the next character is greater in one step in ASCII value of previous one...
if(password[j] - password[i] == 1)
{
consecutive_count += 1;
}
}
}

if(consecutive_count >= 2) //when more than 2 characters are consecutive then decrease the
points...
{
points -= 20; //decrease points by 20...
}
/*-----End of checking the consecutive characters in password-----*/

/*------Print the required details to the user------*/
if(points < 70)
{
```

```
printf("The points for your password out of 100 is: %d",points);
printf("\nYour password is UNSAFE for your confidential data...");
}
else
{
printf("The points for your password out of 100 is: %d",points);
printf("\nYour password is SAFE for your confidential data...");
}

return 0;
}
```

2.

```
#include<stdio.h>

#include<string.h>

#define MAX_LENGTH 100 //assuming this is the maximum lenght of the sequence.increase this if need be


int is_palindrome(char *sequence, int seq_length){

int ispalin=1; //Assuming the sequence is palindrome
char rev_sequence[MAX_LENGTH]; //variable to keep reverse of the sequence
int j=0; //variable to keep current index of reverse sequence
for (int i = seq_length-1; i >= 0; i--)

{

rev_sequence[j]=sequence[i];

j++;

}

rev_sequence[j]='\0'; //ending the sequence with null character to make it a string
for (int i = 0; i < seq_length; i++)

{

if (sequence[i]!=rev_sequence[i])// if any character mismatches sequence is not palindrome as reverse does not match the sequence
{

ispalin=0;

break;

}

}
```

```
return ispalin;

}

int main()

{

char sequence[MAX_LENGTH];

printf("Enter the sequence: ");

scanf("%s",sequence); // taking input from user from stdio
if (is_palindrome(sequence,strlen(sequence))) //is_palindrome takes 2 arguements one is sequence and other is length of the sequence
{

printf("%s is a palindrome\n",sequence);

}

else

{

printf("%s is not palindrome\n",sequence);

}

return 0;

}
```

3.

```
#include <stdio.h>

struct dialing_code {
   char *country;
   int code;
};

int
main (int argc, char* argv[]) {
   int intl_code, i;
   const struct dialing_code country_codes[] = {
      {"Argentina", 54}, {"Bangladesh",       880},
      {"Brazil",    55}, {"Burma (Myanmar)",    95},
      {"China",     86}, {"Colombia",          57},
      {"Congo,Dem.",243}, {"Egypt",            20},
      {"Ethiopia", 251}, {"France",            33},
      {"Germany",   49}, {"India",             91},
      {"Indonesia", 62}, {"Iran",              98},
      {"Italy",     39}, {"Japan",             81},
      {"Mexico",    52}, {"Nigeria",          234},
      {"Pakistan",  92}, {"Philippines",       63},
      {"Poland",    48}, {"Russia",             7}
      };

   int n_entries = sizeof(country_codes) / sizeof(*country_codes);

   do {
      int found = 0;

      printf("Please input the international code(-1 to exit): ");
      scanf("%d", &intl_code);
      if (intl_code == -1)
         break;

      for (i = 0; i < n_entries; i++) {
         if (country_codes[i].code == intl_code) {
            printf("The country is: %s\n", country_codes[i].country);
            found = 1;
         }
      }
      if (!found)
```

```
            printf("Code not found.\n");
    } while(1);

    return 0;
}
```