Question 1:

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

int main()

{

printf("Input a word: \n"); char str[40];

scanf("%s", str); int size=0;

int i=0;

char copy[40]; strcpy(copy, str);

while (str[i]!='\0')

{

size++; i++;

}

int t=0;

for (int j=0, k=size-1; k>j; j++, k--)

{

t=str[j]; str[j]=str[k]; str[k]=t;

}

if (str==copy) printf("\nPalindrome");

else

printf("\nNot a palindrome");

}

Question 2: #include<stdio.h>

int average(int r, int c)

{

int arr[r][c]; int sum=0; float avg=0;

for (int i=0; i<r; i++) for (int j=0; j<c; j++)

scanf("%d", &arr[i][j]);

for (int i=0; i<r; i++)

{

int sum=0;

for (int j=0; j<c; j++)

{

sum=sum + arr[i][j];

}

avg=sum/(c); int f=i+1;

printf("The average of %d is: %f\n", f, avg);

}

return avg;

}

int main()

{

int r,c;

printf("Input number of students: "); scanf("%d", &r);

printf("\nInput number of subjects: "); scanf("%d", &c);

average(r,c);

}

Question 3:

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

int main()

{

printf("Input a given number: \n"); char str[40];

scanf("%s", str); int size=0;

int i=0; int j=0;

int freq=0;

int freqA=0, freqE=0, freqI=0, freqO=0, freqU;

while (str[j]!='\0')

{

size++; j++;

}

for (int i=0; i<size; i++)

{

if (str[i]=='a' || str[i]=='A') freqA++;

if (str[i]=='e'|| str[i]=='E' ) freqE++;

if (str[i]=='i'|| str[i]=='I') freqI++;

if (str[i]=='o'|| str[i]=='O') freqO++;

if (str[i]=='u'|| str[i]=='U') freqU++;

}

printf("A occurs %d time\n", freqA); printf("E occurs %d time\n", freqE); printf("I occurs %d time\n", freqI); printf("O occurs %d time\n", freqO); printf("U occurs %d time\n", freqU);

}

Question 4

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

struct Book { char title[100];

char author[100]; float price;

};

int main() { int n, i, j;

struct Book temp;

printf("Enter number of books: "); scanf("%d", &n);

struct Book books[n];

for (i = 0; i < n; i++) {

printf("\nEnter details of book %d:\n", i + 1); printf("Title: ");

getchar();

fgets(books[i].title, sizeof(books[i].title), stdin); books[i].title[strcspn(books[i].title, "\n")] = '\0';

printf("Author: ");

fgets(books[i].author, sizeof(books[i].author), stdin); books[i].author[strcspn(books[i].author, "\n")] = '\0';

printf("Price: ");

scanf("%f", &books[i].price);

}

for (i = 0; i < n - 1; i++) {

for (j = 0; j < n - i - 1; j++) {

if (books[j].price > books[j + 1].price) { temp = books[j];

books[j] = books[j + 1]; books[j + 1] = temp;

}

}

}

printf("\nBooks sorted by price (ascending):\n"); for (i = 0; i < n; i++) {

printf("\nBook %d:\n", i + 1); printf("Title : %s\n", books[i].title); printf("Author: %s\n", books[i].author); printf("Price : %.2f\n", books[i].price);

}

return 0;

}

Question 5:

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

int findstr(char str[], char sub[]) { char \*pos = strstr(str, sub);

if (pos != NULL) { return (pos - str);

} else {

return -1;

}

}

void deletestr(char str[], char sub[]) { int pos = findstr(str, sub);

if (pos == -1) {

printf("Substring not found. Nothing deleted.\n"); return;

}

int len = strlen(sub); int i;

for (i = pos; str[i + len] != '\0'; i++) { str[i] = str[i + len];

}

str[i] = '\0';

printf("Substring deleted successfully.\n");

}

int main() {

char str[200], sub[100]; int choice, pos;

printf("Enter the main string: "); fgets(str, sizeof(str), stdin); str[strcspn(str, "\n")] = '\0';

do {

printf("\nMenu:\n"); printf("1. Find Substring\n");

printf("2. Delete Substring\n"); printf("3. Exit\n");

printf("Enter your choice: "); scanf("%d", &choice); getchar();

switch (choice) { case 1:

printf("Enter the substring to find: "); fgets(sub, sizeof(sub), stdin); sub[strcspn(sub, "\n")] = '\0';

pos = findSubstring(str, sub); if (pos != -1)

printf("Substring found at position %d (0-based index).\n", pos);

else

printf("Substring not found.\n"); break;

case 2:

printf("Enter the substring to delete: "); fgets(sub, sizeof(sub), stdin); sub[strcspn(sub, "\n")] = '\0'; deleteSubstring(str, sub); printf("Updated string: %s\n", str); break;

case 3:

printf("Exiting program...\n"); break;

default:

printf("Invalid choice! Please try again.\n");

}

} while (choice != 3);

return 0;

}

Question 6: #include <stdio.h>

int Largest(int arr[], int n) { if (n == 1) {

return arr[0];

}

int maxrest = Largest(arr, n - 1);

return (arr[n - 1] > maxRest) ? arr[n - 1] : maxrest;

}

int main() { int n, i;

printf("Enter the number of elements in the array: "); scanf("%d", &n);

int arr[n];

printf("Enter %d elements:\n", n); for (i = 0; i < n; i++) {

scanf("%d", &arr[i]);

}

int largest = Largest(arr, n);

printf("The largest element in the array is: %d\n", largest);

return 0;

}

Question 7:

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

void reversestr(char str[], int start, int end) { if (start >= end) {

return;

}

char temp = str[start]; str[start] = str[end]; str[end] = temp;

reversestr(str, start + 1, end - 1);

}

int main() { char str[200];

printf("Enter a string: "); fgets(str, sizeof(str), stdin); str[strcspn(str, "\n")] = '\0';

reversestr(str, 0, strlen(str) - 1); printf("Reversed string: %s\n", str);

return 0;

}