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**Branch-Chemical Engineering**

**Assignment Questions Answer(Week-2)**

  1. **Write a C program to calculate the sum of digits of a number.**

|  |  |
| --- | --- |
|  | #include<stdio.h> |
|  | void main(){ |
|  | int num,sum=0,m; |
|  | printf("Enter a number: \n"); |
|  | scanf("%d", &num); |
|  | while(num>0){ |
|  | m=num%10; |
|  | sum=sum+m; |
|  | num=num/10; |
|  | } |
|  | printf("\n Sum of the integers of the number is %d", sum); |
|  | } |

2. **Write a C program to print the sum of all the even elements and even position elements in an array.**

|  |
| --- |
| #include<stdio.h> |
|  | int main(){ |
|  | int arr[7],i,sum=0; |
|  | printf("Enter any array having 7 elements: \n"); |
|  | for(i=0; i<7; i++){ |
|  | scanf("%d", &arr[i]); |
|  | } |
|  | for(i=0; i<7; i++){ |
|  | if(i%2!=0){ |
|  | sum=sum+arr[i]; |
|  | } |
|  | if(arr[i]%2==0){ |
|  | sum=sum+arr[i]; |
|  | } |
|  | } |
|  | printf("\n Sum of all the even elements and even position elements of the array is %d",sum); |
|  | return 0; |
|  | } |

  3. **Write a C program to count the total number of words in a string.**

|  |  |
| --- | --- |
|  | #include<stdio.h> |
|  | #include<string.h> // Header file used for handling of string |
|  | int main(){ |
|  | char sentence[100]; |
|  | int words=1,i; |
|  | printf("Enter a sentence: \n"); |
|  | scanf("%[^\n]",sentence); |
|  |  |
|  | for(i=0; sentence[i]!='\0'; i++){ |
|  | if(sentence[i]== ' '){ |
|  | words++; |
|  | } |
|  | } |
|  | printf("Number of words in the sentence is %d", words); |
|  | return 0; |
|  | } |

  4. **Write a C program to find the largest and smallest element in an array.**

|  |  |
| --- | --- |
|  | #include<stdio.h> |
|  | int main(){ |
|  | int array[10],i,small,large; |
|  | printf("Enter the array: \n"); |
|  | for(i=0;i<10;i++){ |
|  | scanf("%d", &array[i]); |
|  | } |
|  | small=array[0],large=array[0]; |
|  | for(i=0;i<10;i++){ |
|  | if(array[i]<small){ |
|  | small=array[i]; |
|  | } |
|  | if(array[i]>large){ |
|  | large=array[i]; |
|  | } |
|  |  |
|  | }printf("\n The largest number in the array is : %d", large); |
|  | printf("\n The smallest number in the array is : %d", small); |
|  | return 0; |
|  | } |

5. **Write a program to print given patterns using loops :**

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|  |  |
| --- | --- |
|  | #include<stdio.h> |
|  | int main(){ |
|  | int i,j; |
|  | for(i=1; i<=5; i++) |
|  | { |
|  | for(j=1; j<=5; j++) |
|  | { |
|  | if(j==i || (j==5 - i + 1)) |
|  | { |
|  | printf("\*"); |
|  | } |
|  | else |
|  | { |
|  | printf(" "); |
|  | } |
|  | } |
|  |  |
|  | printf("\n"); |
|  | } |
|  | return 0; |
|  | } |