***EXERCISES – 7.1 (Page -206)***

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| 1. **Write a program that creates a**   **function , called avg() ,that reads floating – point numbers entered by the user and returns their average . Without function prototype .**  //1803117  #include<stdio.h>  float avg**();**  int main()  {  printf("Average = %.2f\n",avg());  return 0;  }  float avg**()**  {  int i;  float a[10],sum=0,ava;  printf("Enter 10 numbers :\n");  for(i=1;i<=10;i++)  {  scanf("%f",&a[i]);  sum=sum+a[i];  }  ava=sum/10;  return ava; } | 1. **Write a program that creates a**   **function , called avg() ,that reads floating – point numbers entered by the user and returns their average . With function prototype .**  //1803117  #include<stdio.h>  float avg**(void);**  int main()  {  printf("Average = %.2f\n",avg());  return 0;  }  float avg(**void**)  {  int i;  float a[10],sum=0,ava;  printf("Enter 10 numbers :\n");  for(i=1;i<=10;i++)  {  scanf("%f",&a[i]);  sum=sum+a[i];  }  ava=sum/10;  return ava; } |

***Exercises – 7.2(Page -211 )***

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| **1.Write a function , called fact() , that**  **Uses recursion to compute the factorial of its integer argument .**  //1803117  #include<stdio.h>  int fact(int n);  int main()  {  int n;  printf("Enter a positive number :\n");  scanf("%d",&n);  printf("Factorial of %d is = %d",n,fact(n));  return 0;  }  int fact(int n)  {  if(n==0)  return 1;  else  return n\*fact(n-1);  } | 1. **Write a program that display a string on the screen , one character at a time , using a recursive function**   //1803117  #include<stdio.h>  void str(char \*c);  int main()  {  str("This is an example of Recursion");  return 0;  }  void str(char \*c)  {  if(\*c)  {  printf("%c",\*c);  str(++c);  }  } |

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| **7.3) 2.Write a program that display a prompting message and then to read a string entered by the user using prompt () function .**  //1803117  #include<stdio.h>  void prompt(char \*c,char \*d);  int main()  {  char d[100];  prompt("Input a string : ",d);  printf("The string is :%s\n",d);  return 0;  }  void prompt(char \*c,char \*d)  {  printf("%s\n",c);  gets(d);  } | **7.5)1.Convert this program so that f\_to\_m() uses the old – style declaration form .**  //1803117  #include<stdio.h>  double f\_to\_m(double f);  int main()  {  double feet;  printf("Enter feet: ");  scanf("%lf",&feet);  printf("Meters : %f",f\_to\_m(feet));  return 0;  }  double f\_to\_m(f)  double f;  {  return f/3.28;  } |

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| **Mastery Skill check:page(224)(4). Write a program that uses a recursive function to display the letters of the alphabet .**  //1803117  #include<stdio.h>  char disl(char c);  int main()  {  char ch;  printf("Enter 'A' or 'a' : ");  scanf("%c",&ch);  if(ch=='A')  {disl('A');}  else  disl('a');  return 0;  }  char disl(char c)  {  printf("%c\n",c);  if((c>='A' && c<'Z') || (c>='a' && c<'z'))  disl(c+1);  } | **Cumulative skill check:(2)(page-224): create a function called string\_up() that transforms the string it is called with into uppercase characters**  //1803117  #include<stdio.h>  #include<string.h>  #include<ctype.h>  char string\_up(char c[]);  int main()  {  char ch[100];  printf("Enter a string:\n");  gets(ch);  string\_up(ch);  printf("%s\n",ch);  return 0;  }  char string\_up(char c[])  {  int i=0;  while(c[i]!='\0')  {  c[i]=toupper(c[i]);  i++;  }  return c[i];  } |

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| **Page-225(3). Write a function called avg() that average a list of floating – point values . The function will have two arguments . The first is a pointer to array containing the numbers ; the second is an integer value ,which specifies the size of the array .Demonstrate its use in a program .**  //1803117  #include<stdio.h>  void avg(double \*a,int n);  int main()  {  double arr[1000];  int i,nm;  printf("Enter the size of array :\n");  scanf("%d",&nm);  printf("Enter the value of array:\n");  for(i=0;i<nm;i++)  {  scanf("%lf",&arr[i]);  }  avg(arr,nm);  return 0;  }  void avg(double \*a,int n)  {  int i;  double sum=0;  for(i=0;i<n;i++)  {  sum=sum+\*a;  a++;  }  printf("Average = %.3lf\n",sum/n);  } |