Q1. Describe the decision-making statements and looping statements in c with an example.

Ans. Decision making statements are used to control the flow of program using set of conditions when a particular set of conditions are met the program moves according to instructions given.

Whereas looping statements are used to make an operation repeat multiple time. It saves times as writing lines of code multiple times.

Example:

1. #include<stdio.h>

Int n; scanf(“%d”,&n);

If (n%2==0){

printf(“even”);

}

else {

printf(“odd”);

1. #include<stdio.h>

Int n; scanf(“%d”,&n);

While (n--) {

printf(“%d”,n);

}

Q2. Write a C program to check the integer is Palindrome or not.

Ans. #include<stdio.h>

int main() {

int n,r,sum=0,temp;

printf("enter the number=");

scanf("%d",&n);

temp=n;

while(n>0) {

r=n%10;

sum=(sum\*10)+r;

n=n/10;

}

if(temp==sum){

printf("palindrome number ");

}

Else {

printf("not palindrome");

}

return 0;

}

Q3. What is the difference between pass by value and pass by reference? write the C coding for swapping two numbers using pass by reference.

Ans. Call by value

* Calling operator does not have any access to the underlying element in the calling code.
* A copy of the data is sent to the callee.
* Changes made to the passed variable do not affect the actual value.

   Call by reference

* Calling operator gives a direct reference to the programming element in the calling code.
* The memory address of the stored data is passed.
* Changes to the value have an effect on the original data.

Code for swapping values in C

#include <stdio.h>

void swap(\*int, \*int);

void swap(int \*a, int \*b) {

  int temp;

  temp = \*b;

  \*b = \*a;

  \*a = temp;

}

int main( ) {

  int x, y;

  printf("Enter the value of x and y\n");

  scanf("%d%d",&x,&y);

  printf("Before Swapping\nx = %d\ny = %d\n", x, y);

  swap(&x, &y);

  printf("After Swapping\nx = %d\ny = %d\n", x, y);

  return 0;

}

Q4. Explain the purpose of function prototype and specify the difference between user defined function and built in function.

Ans. The Function prototype serves the following purposes –

* It tells the return type of the data that the function will return.
* It tells the number of arguments passed to the function.
* It tells the data types of each of the passed arguments.

Built-in functions:

Built-in functions are the functions that are provided by any language library. A library function is accessed simply by writing the function name, followed by an optional list of arguments.

User defined functions:

User has to define some functions themselves in order to have their work done. And such functions are called user-defined functions.