W6\_Qn1

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Unit Code: COS10007

Unit Name: Developing Techinical Software

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Problem: Week 6 Question 1

Problem Description: Write a program that concatenates two linked lists of characters.

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#include <stdio.h>

#include <stdlib.h>

struct node

{

char a;

struct node \*next;

};

typedef struct node Node;

typedef Node \*nodePtr;

void printList(nodePtr currentPtr)

{

while(currentPtr!=NULL)

{

printf("%c -> ",currentPtr->a);

currentPtr=currentPtr->next;

}

printf("NULL");

}

void concantenate(nodePtr startPtr1,nodePtr startPtr2)

{

nodePtr temp;

temp=startPtr1;

while(currentPtr->next!=NULL)

{

temp=temp->next;

}

temp->next=startPtr2;

}

int main()

{

nodePtr startPtr1=NULL, startPtr2=NULL, newPtr, currentPtr;

char x='A';

for(int i=0;i<10;i++)

{

newPtr=malloc(sizeof(Node));

newPtr->a=x;

newPtr->next=NULL;

if(startPtr1==NULL)

{

startPtr1=newPtr;

currentPtr=newPtr;

}

else

{

currentPtr->next=newPtr;

currentPtr=newPtr;

}

x++;

}

x='M';

for(int i=0;i<10;i++)

{

newPtr=malloc(sizeof(Node));

newPtr->a=x;

newPtr->next=NULL;

if(startPtr2==NULL)

{

startPtr2=newPtr;

currentPtr=newPtr;

}

else

{

currentPtr->next=newPtr;

currentPtr=newPtr;

}

x++;

}

currentPtr=startPtr1;

printf("The list 1 is \n");

printList(currentPtr);

currentPtr=startPtr2;

printf("\nThe list 2 is \n");

printList(currentPtr);

printf("\nThe combined list is \n");

concantenate(startPtr1,startPtr2);

printList(startPtr1);

return 0;

}

OUTPUT FOR W6\_Qn1

Text

Description automatically generated