

DOCUMENTATION

➤ DECODER:

FUNCTION DEFINITION	INPUT	OUTPUT	DESCRIPTION	SPECIAL CASES
char strToChar(string data)	Binary string	Character representing binary string	Converts a binary string to its equivalent character.	
int binaryToDecimal(int n)	Binary integer	Decimal integer	Converts a binary integer to its equivalent decimal value.	
int stringtoint(string str)	String input	Integer output	Converts string to integer value.	Does not work for long data.
string inttostring(int val)	Integer	String	Converts integer to string data.	
int hextohex(char *num)	Character array	Integer	Converts hexadecimal to decimal.	
string decimaltobin(int n)	Decimal integer	Binary String	Converts decimal to binary.	

MAIN FUNCTION:

Firstly , we traverse string until space or null character occur and store the hex string in a new string "s" and then we convert that hex value to binary to check the following cases.

Vector : store size after corresponding braces

Vmap: map size vector m(index)

Varr: array size vector a(index)

Stack : to keep track of open parenthesis and brackets.

if(bin[0]=='1' && bin[1]=='0' && bin[2]=='1') : FOR MAP

firstly, we take flag value which is the double the size of the map. So it can help us to find where to put colon(:) and comma(,) in the map. We take flag value because map has in a key and value so, in order to keep track of them we use flag. At last, we store that flag value in the vector called vmap.

else if(bin[0]=='1' && bin[1]=='0' && bin[2]=='0') : FOR ARRAY

in this we simply convert the hex value to int value and find the size of the array and push that size in the vector called varr.

else if(bin[0]=='0' && bin[1]=='0' && bin[2]=='0') : FOR INTEGER VALUE

else if(bin[0]=='0' && bin[1]=='1' && bin[2]=='1') : FOR TEXT STRING

if we have a string like 63 616161. so we have 63 initially . To take 616161 as a string we simply increment i and then traverse the string and store "616161" in a string called s. and then we pass that string in a function which convert it to its corresponding character like "aaa" .

else if(bin[0]=='0' && bin[1]=='1' && bin[2]=='0') : FOR BYTE STRING

same as text string.

else if(bin[0]=='1' && bin[1]=='1' && bin[2]=='1') : FOR MAJOR TYPE 7 LIKE TRUE, FALSE, NULL

in this we take care of true, false, null value.

while(a>=0 && varr[a]==0 && st.top()=='[')

to print the "[".

while(m>=0 && vmap[m]==0 && st.top()=='{')

to print the "{".