

Node	Source line	Username: null, password: nesto Email: nesto	Username: nesto, password: null Email: nesto	Username: nesto, password: nesto Email: nesto	Username: : nesto, password: nesto12 Email: nesto	Username: nesto, password: nesto1234 Email: nesto
A	String specialCharacters ="!#\$%&'()*+,-./:;<=>? @[\\]^_`{ }";	*	*	*	*	*
B	if (user==null) {	*	*	*	*	*
C	throw new RuntimeException ("The user is not instantiated");	*				
D	if (user.getUsername()==null user.getPassword()==null)		*	*	*	*
E	throw new RuntimeException ("The user is missing some mandatory information");		*			
F	String password = user.getPassword();			*	*	*
G	String passwordLower = password.toLowerCase();			*	*	*
H	if(passwordLower.contains (user.getUsername() .toLowerCase())) {			*	*	*
I	return false;			*		
J	else if (passwordLower.length()<8)				*	*
K	return false;				*	
L	else {					*
M	boolean digit = false, upper = false, special = false;					*
N	for (int i=0; i<password.length(); i++) {					*****
O	if(Character.isDigit (password.charAt(i)))					*****
P	digit = true;					****
Q	if(Character.isUpperCase (password.charAt(i)))					*****
R	upper = true;					
S	if (specialCharacters. contains(String.valueOf (password.charAt(i))))					*****
T	special = true;					
U	if (!digit !upper !special)					*
V	return false;					*
W	return true;					