

# 项目作业：五则运算计算机的实现

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## 1 设计思路

Name	Explanation
double strtd(string str)	string to double transformation
string dts(double num)	double to string transformation
int character(char s)	differ the value usage in the program
bool filter(string s)	filter whether the value has error or not
void insert(const string s, ExpressionNode *t)	move the position of the value in the program
int isPre(string s)	differ the operational functions
void calculate(ExpressionNode *t)	calculate and error detections
string getvalue(ExpressionNode *t)	transform the value
void makeEmpty(ExpressionNode *t)	empty the tree

## 2 测试结果

input:  $2^{(1+3)}-5*(15.23)/(1+2)*3-5$

output:  $2^{(1+3)}-5*(15.23)/(1+2)*3-5 = -65.1499$

input:  $1.25+(3*(1+2^2)*3-43)(4-2)$

output:  $1.25+(3*(1+2^2)*3-43)(4-2) = 5.25$

input:  $2^{(1+3))-5*(15.23)/(1+2)*3-5$

Error: Unusual brackets position

input:  $2^{(1+3)}-5*(15.23)/(1-1)*3-5$

Error: Divisor = 0